Manuscript Report No. 88-04

Summary of Phytoplankton data for the Nelson River and Rat-Burntwood lakes, 1987

By Livingston, L. 1988

Manitoba
Natural Resources
Fisheries

Livingston, L. 1988.

Summary of Phytoplankton data for the Nelson River and Rat-Burntwood lakes, 1987.

Manitoba Department of Natural Resources.
Fisheries Branch MS Report No. 88-04.

ABSTRACT

During the 1987 field season, phytoplankton samples were collected from Cross, Rat, Sipiwesk, Split, Stephens and Threepoint lakes. The phytoplankton were identified to species and biomass was calculated. In this report the emphasis was placed on identification to genera and the occurrence of the major algal species.

In the 1987 samples, with exception of Cross Lake, the dominant taxonomic order was Diatomeae. The secondary order was Cyanophyceae or Cryptophyceae. For Cross Lake, Cyanophyceae was the dominant order, while Diatomeae and Chlorophyceae were the secondary orders. The dominant genera for the lakes were one or a combination of Melosira, Anabaena, Pediastrum, or Rhodomonas. Compared to the 1986 phytoplankton data, there was an increase in diversity of genera for each order.

TABLE OF CONTENTS

	Page
ABSTRACT	i
LIST OF TABLES	ii
LIST OF FIGURES	iii
LIST OF APPENDICES	iv
INTRODUCTION	1
METHODS & MATERIALS	2
RESULTS	3
ACKNOWLEDGEMENTS	5
REFERENCES	6
APPENDIX	13

LIST OF TABLES

Table		Page
1.	Phytoplankton taxa from Cross Lake, Manitoba, 1987 .	7
2.	Phytoplankton taxa from Rat Lake, Manitoba, 1987 ...	8
3.	Phytoplankton taxa from Sipiwesk Lake, Manitoba, 1987	9
4.	Phytoplankton taxa from Split Lake, Manitoba, 1987 .	10
5.	Phytoplankton taxa from Stephens Lake, Manitoba, 1987	11
6.	Phytoplankton taxa from Threepoint Lake, Manitoba, 1987	12

LIST OF FIGURES

Figure		Page
1.	Location of the six lakes sampled for phytoplankton, 1987	14
2.	Limnological sampling sites from Cross Lake, Manitoba, 1987	15
3.	Limnological sampling sites from Rat Lake, Manitoba, 1987	16
4.	Limnological sampling sites from Sipiwesk Lake, 1987	17
5.	Limnological sampling sites from Split Lake, 1987	18
6.	Limnological sampling sites from Stephens Lake, 1987	19
7.	Limnological sampling sites from Threepoint Lake, 1987	20

LIST OF APPENDICES

Appendix		Page
A1.	Algal genera from lakes sampled in 1987	13
B1.	Phytoplankton data from Cross Lake, 1987	21
B2.	Phytoplankton data from Rat Lake, 1987	49
B3.	Phytoplankton data from Sipiwesk Lake, 1987	73
B4.	Phytoplankton data from Split Lake, 1987	97
B5.	Phytoplankton data from Stephens Lake, 1987	123
B6.	Phytoplankton data from Threepoint Lake, 1987	143

INTRODUCTION

The 1987 data were compiled in conjunction with an ecological monitoring program under the auspices of Claim #18 of the Northern Flood Agreement. This study was initiated to assess the impact of the Churchill River diversion on the fish ecology of the northern lakes. It is necessary that all the monitored lakes have background information documented so that future comparisons can be made.

One aspect of ecological monitoring included the collection of phytoplankton samples from Rat, Threepoint, Cross, Sipiwesk, Split and Stephens lakes. Rat and Threepoint lakes, on the immediate Churchill River diversion route, are referred to as the diversion lakes. Cross and Sipiwesk, situated at the upper reaches of the Nelson, are referred to as the Upper Nelson. Split and Stephens lakes, situated near the lower reach of the Nelson, are referred to as the Lower Nelson.

The main objectives of this report are:

1. to list the occurrence of algal groups, and
2. to identify the dominant, common and present genera.

This report functions only to provide baseline information on the algae composition of the aforementioned lakes and is not concerned with the interpretations of results. Data print-outs summarizing the analysed phytoplankton are appended to this report in order to make the information readily available for future reference.

METHODS AND MATERIALS

In 1987, phytoplankton samples were collected monthly from all stations, May through September. Using 1-litre clear polyethylene bottles, water samples were taken at elbow depth. The bottles were capped and stored in a covered cooler for transport back to the laboratory. Subsamples for phytoplankton analysis were taken from these bottles generally within 5-6 h of field collection. After shaking thoroughly, enough water was poured into 100 mL glass storage bottles to fill to just below the bottle neck. One mL of Lugol's solution was added to the glass bottles as a preservative.

The samples were sent to Department of Fisheries and Oceans, and analysed by D. Findlay. His methods were as follows:

"An aliquot of 2 or 10 mL of the preserved samples were gravity settled for 24 hours to allow for identification and counting. The samples were examined through a Zeiss inverted microscope. Counts were performed at magnifications of 125x and 400x with phase contrast illumination. All counts were done by the Utermohl technique as modified by Navwerck (1963).

Wet biomass was estimated by approximating the cell volume of each species. Estimates of cell volume for each species were obtained by measuring cells and applying the geometric formula best fitted to the shape of the cell (Vollenweider, 1968). Species which formed chains or filaments (Melosira, Anabaena, Aphanizomenon, etc.) were measured as a filament. A density of 1.0 was assumed in calculating cell weight from cell volume."

RESULTS

In all the lakes, the dominant order generally included the dominant genus. For example, at Stn. 1 in Sipiwesk Lake (Sept., Table 3), Cyanophyceae was the dominant order and, Aphanizomenon, which belongs to this order was the domiant genus. At Stns. 2 & 3, Diatomeae was the dominant order and Melosira, which belongs to Diatomeae, was the dominant genus. Exceptions to this occurred from Sipiwesk Lake (Table 3, August, Stn. 2 sample) where Melosira, the dominant genus, doesn't belong to the dominant order Cyanophyceae. In this case Cyanophyceae was dominant due to the diversity of its genera, which had higher individual biomass values. When summed, these genera composed a greater biomass than any of the other orders. A final observation occurred where genera from different orders were sometimes co-dominant. Table 3, (Stn. 1, May 13) shows Rhodomonas and Melosira, both from two different orders, were co-dominant.

In 1980, and especially 1981 and 1986 Cross Lake samples (Livingston, 1986), the dominant order was generally Diatomeae. Chlorophyceae was the secondary order in 1980 and 1981, with a shift to Cyanophyceae in 1986. Pediastrum was the most abundant genus in 1980 with a transition towards Melosira spp., Asterionella in 1981 and a combination of either Melosira spp., Asterionella from Diatomeae, or Anabaena, Aphanizomenon, from Cyanophyceae in 1986.

In the 1987 Cross Lake samples, Cyanophyceae was generally the dominant order. Diatomeae and Chlorophyceae were the secondary orders.

A shift back to Pediastrum as a dominant or at common genera, along with Melosira and Anabaena, was observed. For the first time in Cross Lake data, Rhodomonas spp. from the order Cryptophyceae, was a dominant (Table 1, Stn. 3, May) if not a common genus.

Generally, at most stations in all the lakes, one genera was significantly dominant. For example, combined Melosira spp. listed under Group 5 of Appendix B2 (Stn. 1, May), composed a much greater biomass than any of the other species.

Excluding Cross Lake, the dominant order for all the lakes in 1987 was Diatomeae. In Cross Lake it was Cyanophyceae. Cryptophyceae was the secondary order in most of the lakes. The exception was Cross Lake where Chlorophyceae and Diatomeae were the secondary order. In most cases, the dominant genus was Melosira, Anabaena, Pediastrum or Rhodomonas.

In the 1986 data, the order Cryptophyceae was either absent or rarely present, where as it dominated, or in all the lakes sampled in 1987 (Tables 1-6). An increase in the occurrence of the orders Peridineae and especially Euglenophyceae was observed in the 1987 data. These occurrences in orders could be attributed to a different sampling technique. The 1986 samples were collected using a 73μ Wisconsin plankton net. The mesh size wouldn't retain the lower size range of phytoplankton (<73μ) represented by the majority of phytoplankton groups. In 1987, by using 1-litre bottles to collect water samples all groups if present would be accounted for. Thus overall, in 1987, there was a greater diversity of genera in each order.

ACKNOWLEDGEMENTS

A special appreciation to D. Findlay who analysed the phytoplankton samples this year.

The field data was collected by D. Green, I. Hagenson, L. Mohr, A. Derksen and seasonal staff. Coreene Caverly typed and assembled this report.

REFERENCES

Livingston, L. 1987. A checklist of phytoplankton genera for Nelson River and Rat-Burntwood lakes, 1980, 1981 and 1986. Man. Dept. of Nat. Res. Fish. Br. MS Report No. 87-14. 20pp.

Table 1. Occurrence of phytoplankton groups from Cross Lake, Manitoba, 1980. (1 = dominant; 2 = common; 3 = present; 4 = rare). Underlining denotes importance of genera; solid line ≈70%; broken line ≈24%, no underline ≈5%.

Station No.	Date	Cyanophyceae	Chlorophyceae	Chrysophyceae	Diatomeae	Cryptophyceae	Peridineae	Euglenophyceae	COMMON GENERA
1	May 13	3	1	2	1	3	4	3	Pediastrum, Melosira spp., Scenedesmus sp., Gyrosigma spp., Dinobryon spp., Euglena, Aphanothece
2		4	2	3	1	4	4	4	Pediastrum, Melosira, Tabellaria, Dinobryon, Stephanodiscus, Scenedesmus
3		-	4	2	3	1	4	4	Rhodomonas spp., Katablepharis, Chrysochromulina spp., Melosira, Dinobryon
1	June 9	4	2	3	1	3	4	-	Melosira, Pediastrum, Rhodomonas spp., Monoraphidium, small Chrysophyceae
2		1	2	3	3	4	4	4	Anabaena spp., Pediastrum, Oocystis, Lyngbya sp., Dinobryon, large Chrysophyceae
3		1	2	3	3	4	4	-	Anabaena spp., Pediastrum, Melosira, large Chrysophyceae, Dinobryon, Botryococcus
1	July 8	3	3	3	2	1	4	4	Rhodomonas spp., Melosira, Anabaena, Cryptomonas spp., Pediastrum, Salpingoeca sp.
2		1	2	4	3	4	4	4	Anabaena spp., Pediastrum, Melosira, Aphanothece sp., Lyngbya sp., Salpingoeca sp.
3		1	2	4	3	4	4	4	Anabaena spp., Pediastrum, Melosira, Aphanothece sp., Tabellaria, Scenedesmus
1	Aug. 4	3	3	3	1	2	4	-	Melosira, Rhodomonas spp., Anabaena spp., Botryococcus, small Chrysophyceae
2		1	2	4	3	4	4	4	Anabaena spp., Aphanothece sp., Pediastrum, Botryococcus, Melosira, Gyrozigma sp.
3		3	1	4	2	4	4	4	Pediastrum, Melosira, Scenedesmus spp., Botryococcus, Oocystis, Gyrozigma sp.

- Order not present

Table 2. Occurrence of phytoplankton groups from Rat Lake, Manitoba, 1987. (1 = dominant; 2 = common; 3 = present; 4 = rare). Underlining denotes importance of genera; solid line ≈70%; broken line ≈24%, no underline ≈5%.

Station No.	Date	Cyanophyceae	Chlorophyceae	Chrysophyceae	Diatomeae	Cryptophyceae	Peridineae	Euglenophyceae	COMMON GENERA
1	May 14	4	3	4	1	2	2	4	Melosira spp., Rhodomonas spp., Peridinium spp., Gymnodinium sp., Pediastrum, Cryptomonas spp.,
2		3	2	4	1	2	3	4	Melosira spp., Rhodomonas spp., Pediastrum, Gymnodinium sp., Peridinium, Anabaena
3		4	4	4	1	2	3	4	Melosira spp., Rhodomonas spp., Peridinium, Gymnodinium sp., Aphanizomenon, Cryptomonas spp.,
1	June 8	3	3	2	1	2	4	4	Melosira spp., Rhodomonas spp., Aphanizomenon, Salpingoeca sp., large Chrysophycease, Chrysochromulina
2		3	2	3	1	2	4	-	Melosira spp., Rhodomonas spp., Aphanizomenon, Botryococcus, Chrysochromulina spp., Peridinium
3		3	4	3	1	2	4	4	Melosira spp., Rhodomonas spp., Aphanizomenon, Asterionella spp., small Chrysophyceae
1	July 6	2	3	3	1	2	4	4	Melosira spp., Anabaena spp., Rhodomonas spp., Rhizosolenia, Aphanizomenon, Chrysochromulina
2		2	2	3	1	3	4	4	Melosira spp., Pediastrum, Aphanizomenon, Anabaena spp., Rhodomonas spp., Salpingoeca sp.,
3		1	3	3	2	2	4	-	Aphanizomenon spp., Rhodomonas spp., Melosira, Dinobryon, Small Chrysophyceae, Pediastrum
1	Aug. 3	1	3	2	4	2	3	4	Aphanizomenon spp., Rhodomonas spp., Chrysochromulina spp., Anabaena spp., Salpingoceae sp., Cryptomonas
2		1	3	3	2	2	4	4	Anabaena spp., Rhodomonas spp., Asterionella spp., Aphanizomenon sp., large Chrysophyceae
3		2	3	2	4	1	4	4	Rhodomonas spp., Cryptomonas spp., Anabaena spp., Paulschulzia, Aphanizomenon
1	Aug. 31	2	3	2	1	1	4	-	Stephanodiscus, Rhodomonas spp., Aphanizomenon spp., Salpingoeca sp., Cryptomonas spp.,
2		2	3	3	1	2	4	4	Melosira, Aphanizomenon spp., Anabaena spp., Stephanodiscus, Rhodomonas spp., Pediastrum
3		2	3	2	1	1	3	4	Rhodomonas spp., Melosira spp., Stephanodiscus, Cryptomonas spp., Aphanizomenon spp.,

- Order not present

Table 3. Occurrence of phytoplankton groups from Sipiwesk Lake, Manitoba, 1987. (1 = dominant; 2 = common; 3 = present; 4 = rare). Underlining denotes importance of genera; solid line ≈70%; broken line ≈24%, no underline ≈5%.

Station No.	Date	Cyanophyceae	Chlorophyceae	Chrysophyceae	Diatomeae	Cryptophyceae	Peridineae	Euglenophyceae	COMMON GENERA
1	May 13	4	4	3	2	1	4	4	Rhodomonas spp., Melosira, Katablepharis, Cryptomonas spp., Salpingoeca sp., Trachelomonas
2		4	4	2	3	1	4	-	Rhodomonas spp., Dinobryon, Chrysochromulina, Gymnodinium sp., small Chrysophyceae
3		4	3	2	4	1	3	4	Rhodomonas spp., Dinobryon spp., Chrysochromulina, Stelexmonas, Botryococcus, Salpingoeca sp.,
1	June 9	4	1	3	4	2	4	-	Bulbochaeta sp., Rhodomonas spp., Botryococcus, Large Chrysophyceae, Small Chrysophyceae
2		4	2	1	1	3	3	4	Botryococcus, Dinobryon spp., Fragilaria, Rhodomonas spp., Gymnodinium, Melosira sp.
3		3	2	3	1	1	4	-	Fragilaria spp., Rhodomonas spp., Pediastrum, Cryptomonas spp., Anabaena spp., Melosira sp.
1	July 8	1	2	3	-	3	4	4	Aphanizomenon spp., Rhodomonas spp., Anabaena, Bulbochaete sp., Salpingoeca sp., Schroederia
2		1	2	2	4	3	4	4	Anabaena spp., Dinobryon, Pediastrum, Rhodomonas spp., Cryptomonas spp., Botryococcus
3		1	2	3	1	2	4	4	Anabaena spp., Melosira spp., Rhodomonas spp., Cryptomonas spp., Oocystis, Pediastrum
1	Aug. 4	1	4	3	2	3	-	4	Aphanizomenon spp., Melosira spp., Anabaena spp., Gamphosphaeria spp., Rhodomonas spp., Mallomonas
2		1	2	4	2	3	-	4	Melosira spp., Spirogrya sp., Aphanizomenon spp., Anabaena spp., Pediastrum, Rhodomonas spp.,
3		2	4	4	1	3	4	-	Melosira spp., Aphanizomenon spp., Anabaena spp., Rhodomonas spp., Pediastrum, Cryptomonas spp.
1	Sept. 1	1	4	4	2	3	4	4	Aphanizomenon spp., Melosira spp., Gomphosphaeria spp., Anabaena spp., Cryptomonas spp.
2		2	3	4	1	3	4	-	Melosira spp., Aphanizomenon spp., Monoraphidium spp., Rhodomonas spp., Cryptomonas spp.
3		2	4	4	1	3	4	-	Melosira spp., Aphanizomenon spp., Anabaena spp., Rhodomonas spp., Cryptomonas spp.

- Order not present

Table 4. Occurrence of phytoplankton groups from Split Lake, Manitoba, 1987. (1 = dominant; 2 = common; 3 = present; 4 = rare). Underlining denotes importance of genera; solid line ≈70%; broken line ≈24%, no underline ≈5%.

Station No.	Date	Cyanophyceae	Chlorophyceae	Chrysophyceae	Diatomeae	Cryptophyceae	Peridineae	Euglenophyceae	COMMON GENERA
1	May 13	4	4	4	1	2	3	4	Melosira spp., Rhodomonas spp., Gymnodinium, Dinobryon, Stephanodiscus, Stelexmonas
2		4	3	3	1	2	3	4	Melosira spp., Rhodomonas spp., Stephanodiscus, Peridinium spp., Gymnodinium sp., Pediastrum
3		4	4	3	1	2	3	4	Melosira spp., Rhodomonas spp., Peridinium spp., Gymnodinium, Dinobryon, Aphanizomenon
1	June 8	3	4	3	1	2	4	4	Melosira spp., Rhodomonas spp., Aphanizomenon spp., Mougeotia sp., Lyngbya sp.
2		4	3	3	1	2	4	4	Melosira spp., Rhodomonas spp., Chrysochromulina, Stephanodiscus, Chlamydomonas, Scenedesmus sp.,
3		2	4	4	1	3	4	4	Melosira spp., Aphanizomenon, Rhodomonas, Chrysochromulina, Synedra spp., Asterionella spp.
1	July 6	1	3	3	2	2	-	4	Anabaena spp., Melosira, Rhodomonas spp., Aphanizomenon spp., Pediastrum, small Chrysophyceae
2		2	3	3	1	2	4	-	Melosira spp., Anabaena spp., Rhodomonas spp., Pediastrum, small Chrysophyceae
3		2	3	4	1	3	4	4	Melosira spp., Aphanizomenon, Rhodomonas spp., Pediastrum, Anabaena, Gymnodinium
1	Aug. 3	3	3	4	1	2	4	4	Melosira spp., Rhodomonas spp., Cryptomonas spp., Anabaena spp., Aphanizomenon spp., Gomphosphaeria
2		2	3	4	1	2	4	4	Melosira spp., Aphanizomenon spp., Rhodomonas spp., Cryptomonas spp., Aphanothece sp., Oocystis
3		3	3	2	4	1	2	3	Rhodomonas spp., Gymnodinium, Salpingoeca sp., Cryptomonas spp., small Chrysophyceae
1	Aug. 31	2	4	3	1	3	4	4	Melosira spp., Rhodomonas spp., Salpingoeca spp., Aphanizomenon spp., Gomphosphaeria, Anabaena spp.
2		2	3	4	1	4	4	-	Melosira spp., Gomphosphaeria, Aphanizomenon spp., Spirogrya sp., Rhodomonas spp., Botryococcus
3		4	3	4	1	2	4	4	Melosira, Rhodomonas spp., Collodictyon sp., Cryptomonas spp., Trachelomonas

- Order not present

Table 5. Occurrence of phytoplankton groups from Stephens Lake, Manitoba, 1987. (1 = dominant; 2 = common; 3 = present; 4 = rare). Underlining denotes importance of genera; solid line ≈70%; broken line ≈24%, no underline ≈5%.

Station No.	Date	Cyanophyceae	Chlorophyceae	Chrysophyceae	Diatomeae	Cryptophyceae	Peridineae	Euglenophyceae	COMMON GENERA
1	June 8	4	3	2	1	3	4	-	Melosira spp., Chrysochromulina, Rhodomonas spp., Chlamydomonas spp., Salpingoeca sp.
2		3	4	3	1	2	-	4	Melosira spp., Rhodomonas spp., Lyngbya sp., Chrysochromulina spp., Stephanodiscus
3		4	4	3	1	2	-	-	Melosira spp., Rhodomonas spp., Pediastrum, Dinobryon, Stephanodiscus, Aphanizomenon
1	July 6	3	3	1	2	3	4	4	Synedra, Chrysochromulina spp., large Chrysophyceae, Dinobryon, small Chrysophyceae
2		2	2	3	1	1	3	4	Melosira spp., Rhodomonas spp., Cryptomonas spp., Anabaena spp., Pediastrum, Ceratium
3		3	3	2	1	2	4	4	Melosira spp., Rhodomonas spp., Dinobryon, Cryptomonas spp., Pediastrum, Salpingoeca sp.
1	Aug. 3	2	3	3	1	2	4	4	Melosira spp., Rhodomonas spp., Aphanizomenon spp., Anabaena spp., Botryococcus
2		3	3	4	1	2	4	4	Melosira spp., Rhodomonas spp., Collodictyon sp., Cryptomonas spp., Anabaena sp., Gomphosphaeria
3		3	3	4	1	2	-	4	Melosira spp., Rhodomonas spp., Pediastrum, Cryptomonas spp., Aphanothece sp., Anabaena spp.
1	Aug. 31	1	3	3	3	2	4	4	Aphanizomenon spp., Anabaena spp., Rhodomonas spp., Botryococcus, Lyngbya, Rhizosolenia
2		2	4	4	1	3	-	-	Melosira spp., Aphanizomenon spp., Rhodomonas spp., Gomphosphaeria, Cryptomonas spp.,
3		3	3	2	1	2	-	4	Melosira spp., Salpingoeca sp., Rhodomonas spp., Aphanizomenon spp., Cryptomonas spp., Gomphosphaeria

Table 6. Occurrence of phytoplankton groups from Threepoint Lake, Manitoba, 1987. (1 = dominant; 2 = common; 3 = present; 4 = rare). Underlining denotes importance of genera; solid line ≈70%; broken line ≈24%, no underline ≈5%.

Station No.	Date	Cyanophyceae	Chlorophyceae	Chrysophyceae	Diatomeae	Cryptophyceae	Peridineae	Euglenophyceae	COMMON GENERA
1	May 14	3	4	4	1	2	3	4	Melosira spp., Rhodomonas, Aphanizomenon, Gymnodinium sp., Peridinium spp., Stelexmonas
2		3	4	4	1	2	3	4	Melosira spp., Rhodomonas, Aphanizomenon, Peridinium spp., Gymnodinium sp., Cryptomonas spp.
3		4	4	4	1	2	3	4	Melosira spp., Rhodomonas, Gymnodinium sp., Peridinium spp., Aphanizomenon , Cryptomonas spp.
1	June 9	2	3	2	1	4	4	-	Melosira spp., Lyngbya sp., Asterionella spp., Tabellaria, Synedra spp., large Chrysophyceae
2		2	4	2	1	3	4	4	Melosira spp., Rhizosolenia, Aphanizomenon, Lyngbya sp., large Chrysophyceae
3		4	4	2	1	3	4	4	Melosira spp., large Chrysophyceae, Rhodomonas, Asterionella spp., Katablepharis
1	July 7	2	4	3	1	4	4	4	Melosira spp., Aphanizomenon, large Chrysophyceae, Rhodomonas, large Chrysophyceae
2		2	3	2	1	2	4	4	Melosira spp., Aphanizomenon, Rhodomonas, small Chrysophyceae, Rhizosolenia, Synura
3		2	3	3	1	2	4	3	Melosira spp., Aphnizomenon, Rhodomonas, Cryptomonas spp., Anabaena spp.
1	Aug. 14	3	4	2	1	2	4	4	Melosira spp., Cryptomonas spp., Rhodomonas spp., Katablepharis, large Chrysophyceae
2		4	4	3	2	1	3	4	Cryptomonas spp., Melosira, Rhodomonas spp., Gymnodinium sp., Katablepharis
3		4	4	3	2	1	4	4	Melosira, Cryptomonas spp., Rhodomonas spp., small Chrysophyceae, Peridinium spp.
1	Aug. 31	4	4	3	1	2	4	4	Melosira, Rhodomonas spp., Cryptomonas spp., Katablepharis, Cyclotella spp., large Chrysophyceae
2		3	4	3	1	2	4	4	Melosira, Cryptomonas spp., Rhodomonas spp., Euglena, small Chrysophyceae, Aphanizomenon
3		4	3	3	2	1	3	4	Rhodomonas spp., Melosira, Cryptomonas spp., Katablepharis, small Chrysophyceae

- Order not present.

Appendix A1. Algal genera from lakes sampled in 1987.

Order	Cyanophyceae	Chlorophyceae	Chrysophyceae	Cryptophyceae	Diatomeae	Peridineae	Euglenophyceae
	Anabaena	Ankistrodesmus	Bicoeca	Cryptomonas	Asterionella	Ceratium	Astasia
	Aphanizomenon	Ankrya	Bitrichia	Katablepharis	Cyclotella	Gymnodinium	Euglena
	Aphanocopsa	Arthrodesmus	Chrysochromulina	Pyramidomonas	Diatoma	Peridinium	Trachelomonas
	Chroococcus	Botryococcus	Chrysoikos	Rhodomonas	small Diatoms		
	Gomphosphaeria	Bulbochaete	small Chrysophyceae		large Diatoms		
	Lyngbya	Carteria	large Chrysophyceae		Fragilaria		
	Merismopedia	Chlamydomonas	Dinobryon		Frustula		
	Microcystis	Chloregonium	Gloeobotrys		Gyrosigma		
	Oscillatoria	Chodatella	Kephyrion		Melosira		
	Synechococcus	Closterium	Mallomonas		Navicula		
		Coelastrum	Ochromonas		Nitzchia		
		Collodictyon	Pteridomonas		Rhizosolenia		
		Cosmarium	Salpingoeca		Stephanodiscus		
		Crucigeniella	Spinifiromonas		Surirella		
		Dictyosphaerium	Stelexmonas		Gynedra		
		Elakatothrix	Stichogloeca		Tabellaria		
		Euastrum	Synura				
		Eudorina	Uroglena				
		Cloeococcus					
		Kichnerella					
		Monoraphidium					
		Mougeotia					
		Oocystis					
		Paulschulzia					
		Pediastrum					
		Planctonema					
		Quadrigula					
		Scenedesmus					
		Schroederia					
		Small greens					
		Spirogrya					
		Spondylosium					
		Staurastrum					
		Teilingia					
		Tetraedon					
		Westella					

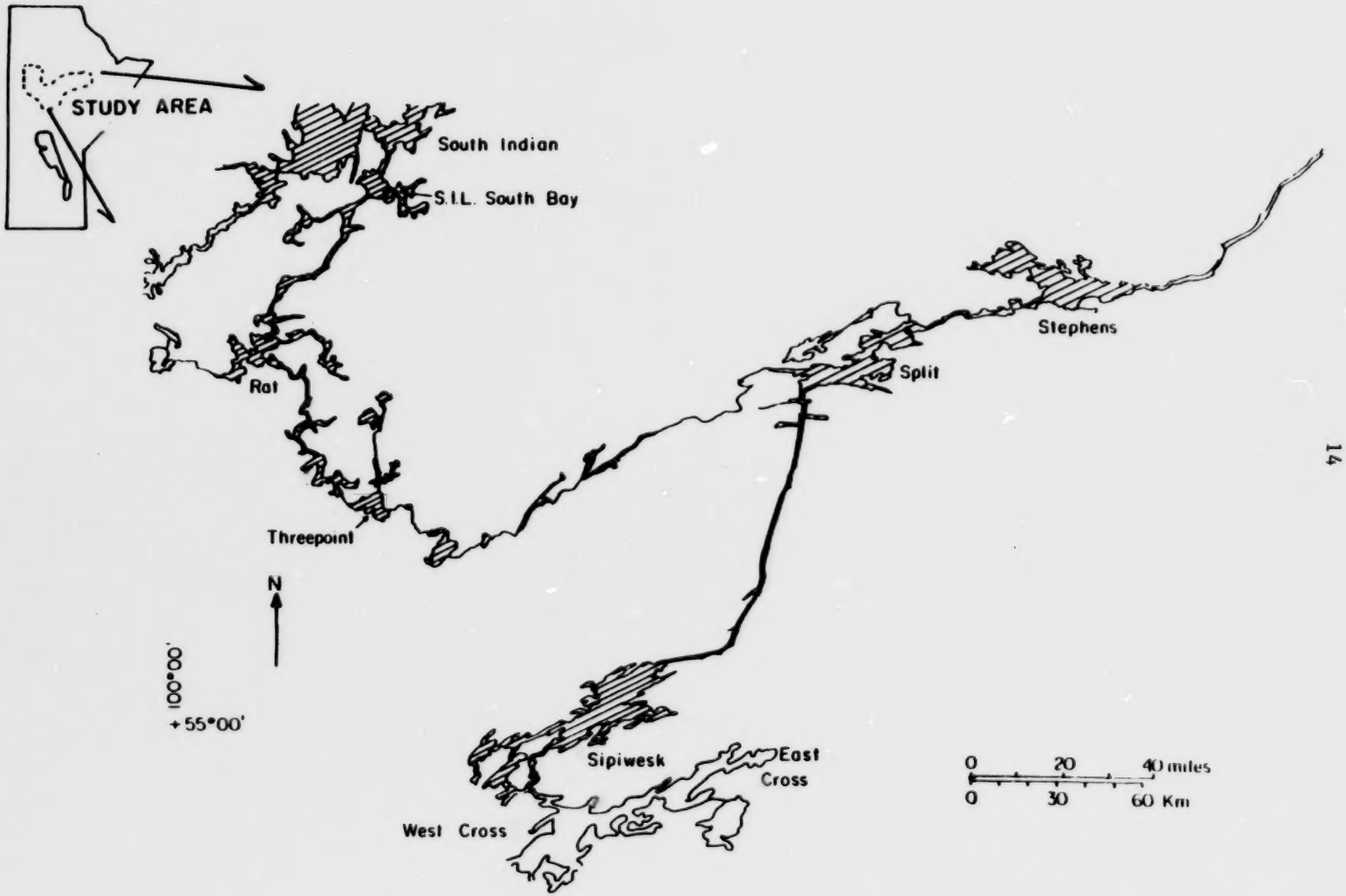

Fig. 1. Location of the six lakes sampled for phytoplankton, 1986.

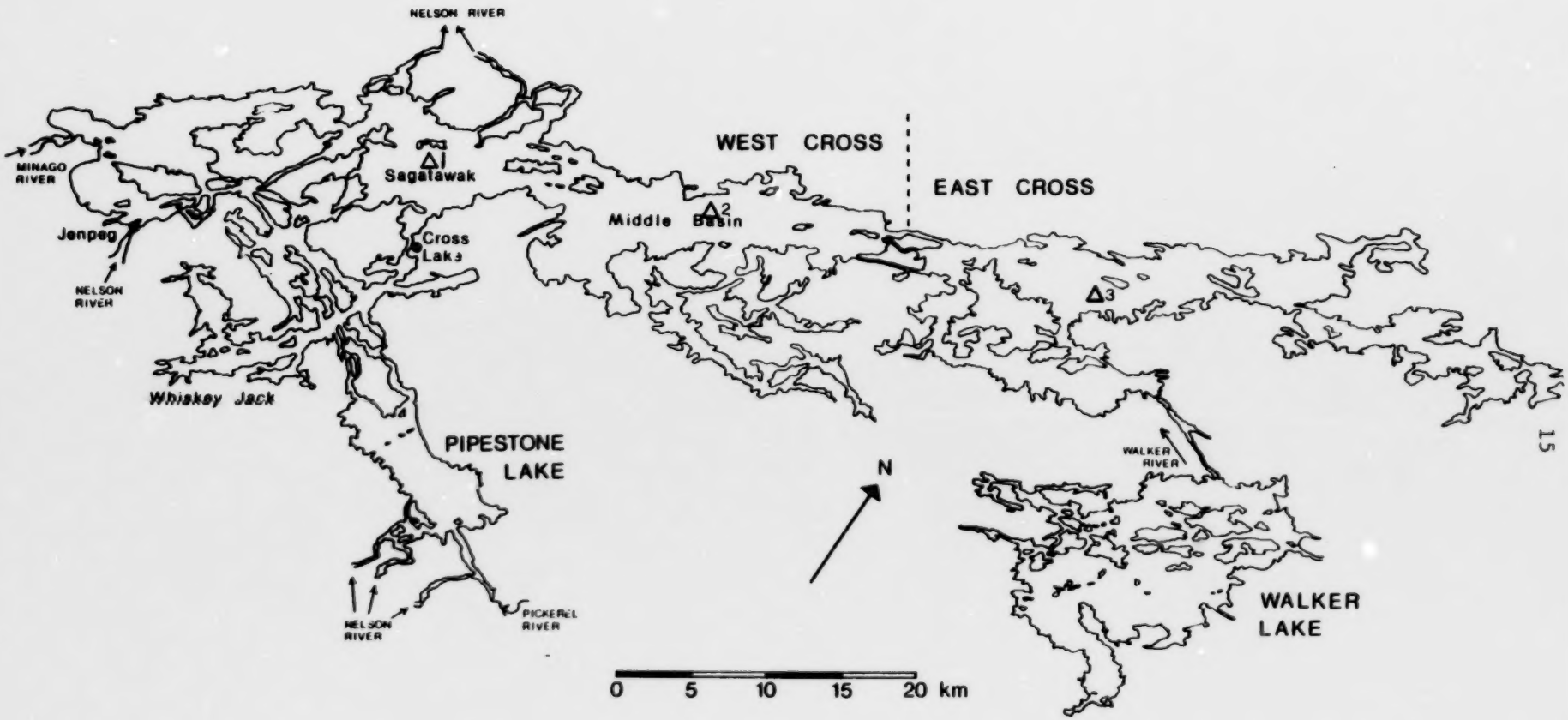

Figure 2. Limnological sampling sites from Cross Lake, Manitoba, 1987.

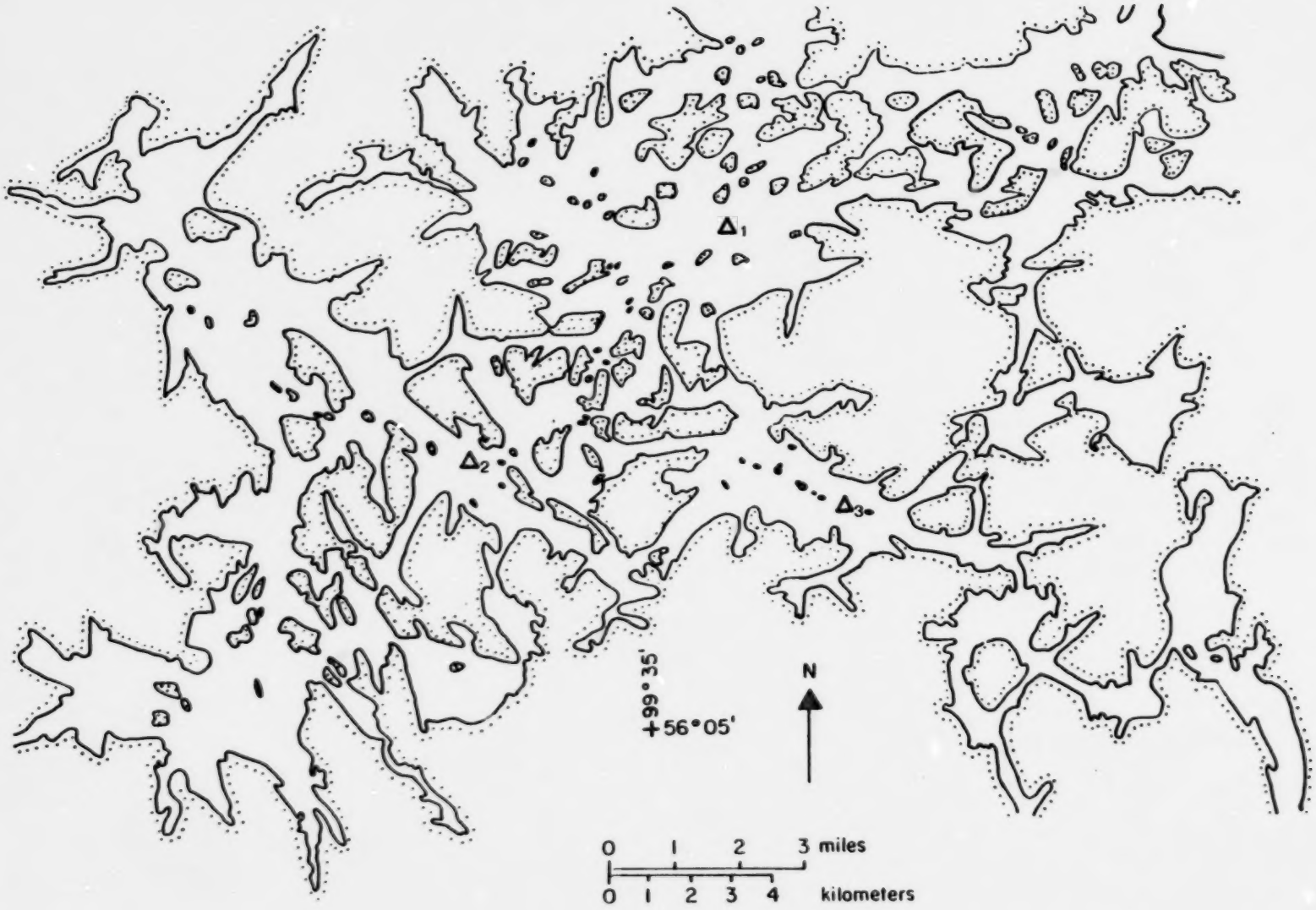

Figure 3. Limnological sampling sites from Rat Lake, Manitoba, 1987.

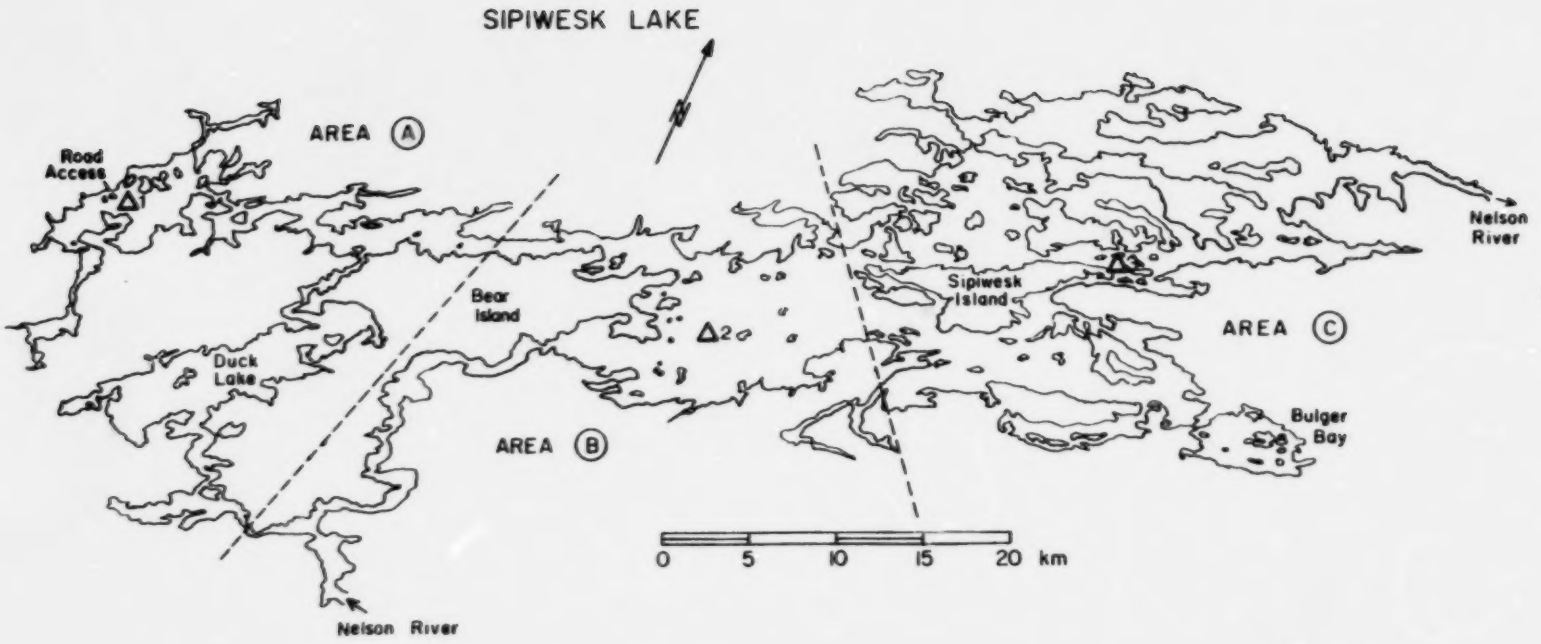

Figure 4. Limnological sampling sites from Sipiwesk Lake, Manitoba, 1987.

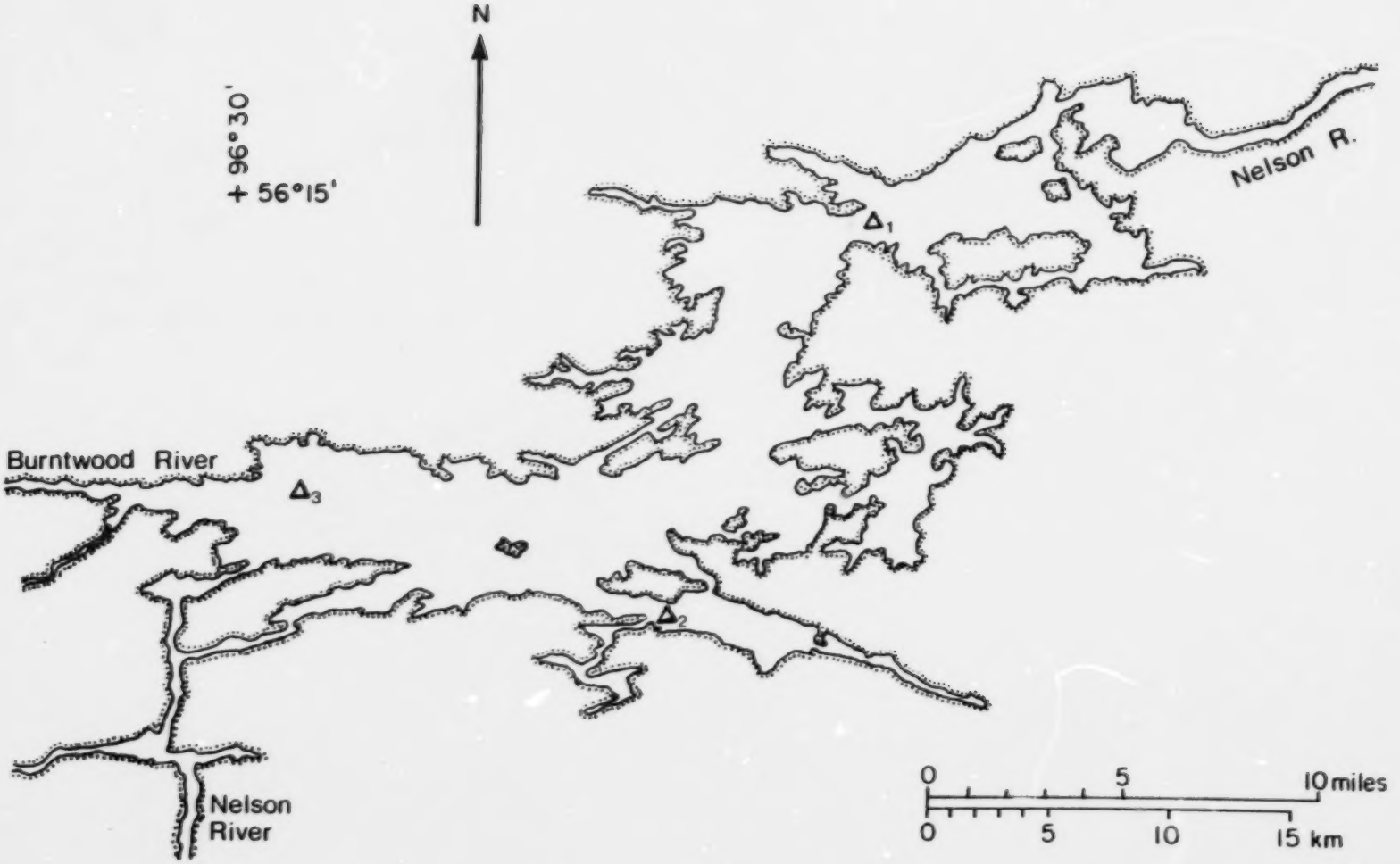

Figure 5. Limnological sampling sites from Split Lake, Manitoba, 1987.

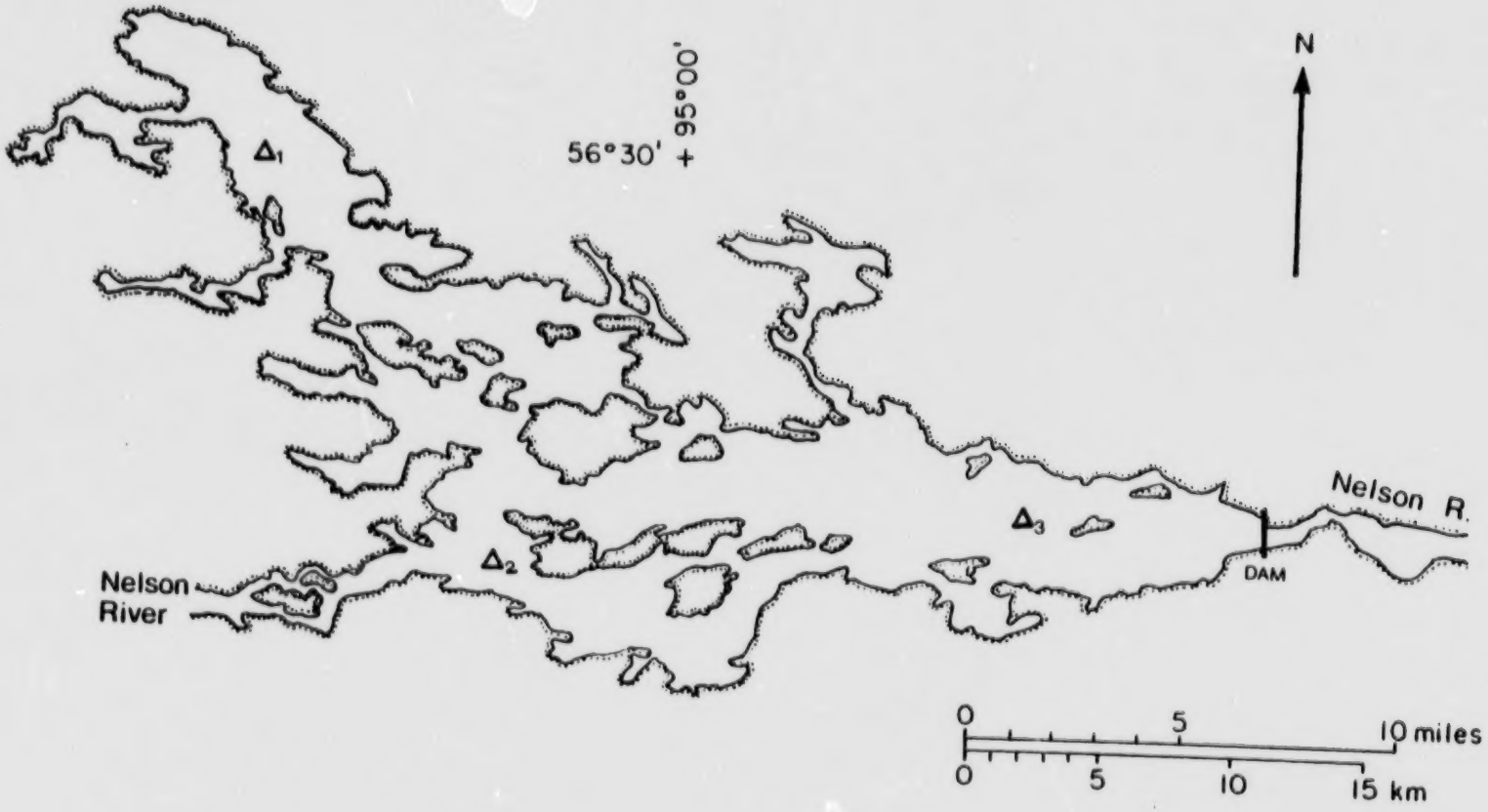

Figure 6. Limnological sampling sites from Stephens Lake, Manitoba, 1987.

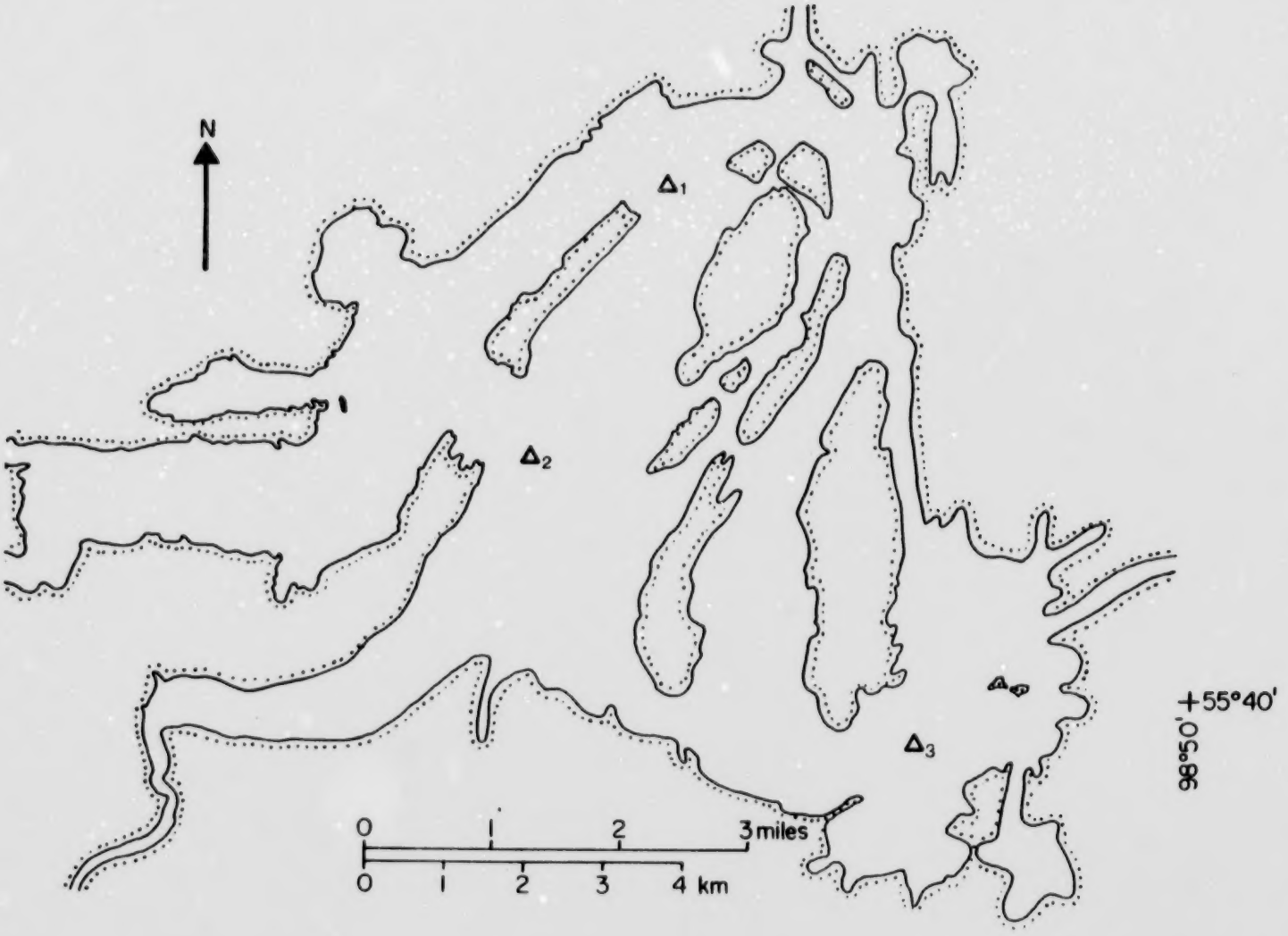

Figure 7. Limnological sampling sites from Threepoint Lake, Manitoba, 1987.

APPENDIX B1. Phytoplankton data from Cross Lake, 1987.

Group	
1	Cyanophyceae - blue greens
2	Chlorophyceae - greens
3	Euglenophyceae - euglenophytes
4	Chrysophyceae - chrysophytes
5	Bacillariophyceae - diatoms
6	Cryptophyceae - cryptophytes
7	Peridineae - dinoflagellates

CROSS 801

13 MAY 87 (DAY 133)

SPECIES=45
STRATA DEPTH=
STRATA VOL.=
FILE NAME = B0113MAY87

REC #	SPECIES	CELL VOLUME	CORR. FACT.	RAW COUNT	ESD	CELLS /LITER	BIOMASS mg/m^3
	GROUP 1						
3	APHANOTHECE SP.	1000	39683	4	12.41	158732	158.73
4	APHANIZOMENON FLOS-AQUAE	1400	39683	1	13.88	39683	55.56
5	LYNGBYA SP.	260	39683	1	7.92	39683	10.32
	GROUP 2						
6	PYRAMIDOMONAS TETRARHYN.	1400	1000	3	13.88	3000	4.20
7	GLOEOCOCCUS SCHROETERI	15	39683	8	3.06	317464	4.76
8	PEDIASTRUM DUPLEX	24400	1000	109	35.99	109000	2659.60
9	OOCYSTIS LACUSTRIS	300	39683	3	8.31	119049	35.71
10	SCENEDESMUS QUADRICAUDA	75	39683	64	5.25	2539712	190.48
11	SCENEDESMUS BREVISPINA	150	39683	16	6.59	634928	95.24
12	SCENEDESMUS SP.	100	39683	122	5.76	4841326	484.13
13	SCENEDESMUS SP.	250	39683	12	7.87	476196	119.05
14	DICTYOSPHAERIUM SIMPLEX	150	39683	4	6.59	158732	23.81
15	MONORAPHIDIUM SETIFORME	110	39683	2	5.94	79366	8.73
16	MONORAPHIDIUM CONTORTUM	35	39683	3	4.06	119049	4.17
17	CRUCIGENIELLA SPP.	15	39683	48	3.06	1904784	28.57
18	BOTRYOCOCCUS BRAUNII	525	1000	4	10.01	4000	2.10
	GROUP 3						
19	EUGLENA ACUS	19850	1000	12	33.59	12000	238.20
	GROUP 4						
20	SMALL CHRYSOPHYCEAE	50	39683	14	4.57	555362	27.78
21	LARGE CHRYSOPHYCEAE	380	39683	2	8.99	79366	30.16
22	CHRYSOCHROMULINA PARVA	50	39683	11	4.57	436513	21.83
23	MALLOMONAS CAUDATA	6000	1000	1	22.55	1000	6.00
24	DINOBRYON SERTULARIA	250	39683	1	7.82	39683	9.92
25	DINOBRYON SOCIALE	250	39683	32	7.82	1269856	317.46
26	CHRYSOIKOS SKUJA	50	39683	1	4.57	39683	1.98
27	CHRYSOCHROMULINA BRIV.LAU.	680	39683	4	8.99	158732	60.32
28	SALPINGOECA SP.	380	39683	1	8.99	39683	15.08
	GROUP 5						
29	MELOSIRA ITALICA	12000	39683	1	28.40	39683	476.20
30	MELOSIRA SP.	6925	39683	6	23.65	238098	1648.83
31	CYCLOTELLA SPP.	1280	1000	1	13.47	1000	1.28
32	TABELLARIA FENESTRATA	2524	1000	41	16.89	41000	103.48
33	FRAGILARIA CROTONENSIS	125	1000	275	6.20	275000	34.38
34	SYNEDRA ACUS	140	1000	790	6.44	790000	110.60
35	SYNEDRA ACUS	250	1000	62	7.82	62000	15.50
36	SYNEDRA ULNA	3664	1000	4	19.13	4000	14.66
37	ASTERIONELLA FORMOSA	140	1000	126	6.44	126000	17.64
38	ASTERIONELLA FORMOSA	230	1000	27	7.60	27000	6.21
39	ASTERIONELLA FORMOSA	3700	1000	25	19.19	25000	92.50
40	GYROSIGMA SP	8460	1000	77	25.28	77000	651.42
41	FRUSTULIA SP	25000	1000	3	34.28	3000	75.00
	GROUP 6						
42	RHODOMONAS MINUTA	80	39683	3	5.35	119049	9.52
43	CRYPTOMONAS EROSA	2300	1000	24	16.38	24000	55.20
44	CRYPTOMONAS ROSTRATIFORM	5250	1000	5	21.56	5000	26.25
45	KATABLEPHARIS OVALIS	150	39683	23	6.59	912709	136.91
	GROUP 7						
46	GYMNODINIUM SP.	17000	1000	2	31.90	2000	34.00
47	PERIDINIUM INCONSPICUM	3550	1000	10	18.93	10000	35.50

CONT'D: CROSS LAKE STN1 13MAY87

********** SUMMARY **********

GROUP NUMBER	CELLS/L	% OF TOTAL	BIOMASS mg/m^3	% OF TOTAL
1	238098.00	1.40	224.61	2.75
2	11306606.00	66.67	3660.55	44.87
3	12000.00	0.07	238.20	2.92
4	2620078.00	15.45	490.53	6.01
5	1708781.00	10.08	3247.69	39.81
6	1060758.00	6.26	227.88	2.79
7	12000.00	0.07	69.50	0.85
TOTAL	16958321.00		8158.96	

AVERAGE EQUIVELANT SPHERICAL VOLUME= 12.90

DIVERSITY INDICES:

MARGALEF'S INDEX = 2.64
SHANNON-WEAVER INDEX = 3.70

CROSS B02

13 MAY 87 (DAY 133)

SPECIES=42
STRATA DEPTH=
STRATA VOL.=
FILE NAME = B0213MAY87

REC #	SPECIES	CELL VOLUME	CORR. FACT.	RAW COUNT	ESD	CELLS /LITER	BIOMASS mg/m^3
	GROUP 1						
3	ANABAENA CIRCINALIS	4900	1000	1	21.07	1000	4.90
4	LYNGBYA SP.	440	39683	4	9.44	158732	69.84
	GROUP 2						
5	PYRAMIDOMONAS TETRARHYN.	2900	1000	2	17.69	2000	5.80
6	PEDIASTRUM DUPLEX	24425	1000	40	36.00	40000	977.00
7	PEDIASTRUM TETRAS	15	39683	4	3.06	158732	2.38
8	SCENEDESMUS QUADRICAUDA	72	39683	16	5.23	634928	47.62
9	SCENEDESMUS BREVISPINA	150	39683	12	6.59	476196	71.43
10	SCENEDESMUS SP.	90	39683	36	5.36	1428588	128.57
11	DICTYOSPHAERIUM SIMPLEX	15	39683	28	3.06	1111124	16.67
12	MONORAPHIDIUM SETIFORME	100	39683	3	5.76	119049	11.90
13	CRUCIGENIELLA SPP.	15	39683	32	3.06	1269836	19.05
14	STAURASTRUM PARADOXUM	10000	1000	1	26.73	1000	10.00
15	SPONDYLOSIUM PLANUM	100	39683	2	5.76	79366	7.94
	GROUP 3						
16	EUGLENA ACUS	13200	1000	2	29.32	2000	26.40
	GROUP 4						
17	SMALL CHRYSOPHYCEAE	50	39683	34	4.57	1349222	67.46
18	SMALL CHRYSOPHYCEAE	380	39683	3	8.99	119049	45.24
19	CHRYSOCHROMULINA PARVA	50	39683	50	4.57	1984150	99.21
20	KEPHYRION SP.	110	39683	1	5.94	39683	4.37
21	DINOBRYON BORGEI	40	39683	1	4.24	39683	1.59
22	DINOBRYON BAVARICUM	270	39683	2	8.02	79366	21.43
23	DINOBRYON SERTULARIA	250	39683	2	7.82	79366	19.84
24	DINOBRYON SOCIALE	250	39683	53	7.82	2103199	525.80
25	SALPINGOECA SP.	380	39683	1	8.99	39683	15.08
26	STELEXOMONAS DICHOTOMA	90	39683	2	5.56	79366	7.14
	GROUP 5						
27	MELOSIRA ITALICA	11900	39683	2	28.33	79366	944.46
28	CYCLOTELLA SPP.	15	39683	3	3.06	119049	1.79
29	TABELLARIA FENESTRATA	25600	1000	26	36.57	26000	665.60
30	FRAGILARIA CROTONENSIS	160	1000	84	6.74	84000	13.44
31	SYNEDRA ACUS	140	1000	651	6.44	651000	91.14
32	SYNEDRA ACUS	250	1000	73	7.82	73000	18.25
33	SYNEDRA ULNA	5100	1000	7	21.36	7000	35.70
34	ASTERIONELLA FORMOSA	140	1000	116	6.44	116000	16.24
35	ASTERIONELLA FORMOSA	230	1000	53	7.60	53000	12.19
36	STEPHANODISCUS ASTREAE	3700	1000	28	19.19	28000	103.60
37	GYROSIGMA SP	8300	1000	22	25.12	22000	182.60
38	NAVICULA SP.	990	1000	4	12.37	4000	3.96
	GROUP 6						
39	RHODOMONAS MINUTA	90	39683	22	5.56	873026	78.57
40	CRYPTOMONAS EROSA	2000	1000	35	15.63	35000	70.00
41	CRYPTOMONAS ROSTRATIFORM	6400	1000	9	23.04	9000	57.60
42	KATABLEPHARIS OVALIS	150	39683	6	6.59	238098	35.71
	GROUP 7						
43	GYMNODINIUM SP.	18300	1000	1	32.70	1000	18.30
44	PERIDINIUM INCONSPICUM	3550	1000	2	18.98	2000	7.10

CONT'D: CROSS LAKE STN 2, 18 MAY 87

********** SUMMARY **********

GROUP NUMBER	CELLS/L	% OF TOTAL	BIOMASS mg/m^3	% OF TOTAL
1	159732.00	1.16	74.74	1.64
2	5320839.00	38.51	1298.36	28.45
3	2000.00	0.01	26.40	0.58
4	5912767.00	42.80	807.15	17.69
5	1262415.00	9.14	2088.96	45.78
6	1155124.00	8.36	241.39	5.30
7	3000.00	0.02	25.40	0.56
TOTAL	13815877.00		4562.90	

AVERAGE EQUIVELANT SPHEREICAL VOLUME= 12.58

DIVERSITY INDICES:

MARGALEF'S INDEX = 2.49

SHANNON-WEAVER INDEX = 3.93

```
##############################
#  CROSS    S03              #
#                            #
#  13 MAY 87 (DAY 133)       #
##############################
```

```
# SPECIES=33
STRATA DEPTH=
STRATA VOL.=
FILE NAME = S0313MAY87
```

REC #	SPECIES	CELL VOLUME	CORR. FACT.	RAW COUNT	ESD	CELLS /LITER	BIOMASS mg/m^3
	GROUP 2						
3	PEDIASTRUM DUPLEX	5800	200	1	22.29	200	1.16
4	SCENEDESMUS QUADRICAUDA	90	7184	4	5.56	28736	2.59
5	MONORAPHIDIUM SETIFORME	110	7184	3	5.94	21552	2.37
6	MONORAPHIDIUM CONTORTUM	45	7184	1	4.41	7184	0.32
7	CLOSTERIUM SP.	1800	200	1	15.09	200	0.36
	GROUP 3						
8	TRACHELOMONAS VOLVOCINA	3300	200	3	21.63	600	3.18
	GROUP 4						
9	SMALL CHRYSOPHYCEAE	50	7184	34	4.57	244256	12.21
10	LARGE CHRYSOPHYCEAE	380	7184	2	8.99	14368	5.46
11	CHRYSOCHROMULINA PARVA	50	7184	83	4.57	596272	29.81
12	DINOBRYON SOCIALE	700	7184	6	11.02	43104	30.17
13	CHRYSOCHROMULINA BRIV.LAU.	380	7184	15	8.99	107760	40.95
14	SALPINGOECA SP.	300	7184	2	8.31	14368	4.31
15	STELEXMONAS DICHOTOMS	80	7184	6	5.35	43104	3.45
	GROUP 5						
16	MELOSIRA ITALICA	4700	7184	1	20.78	7184	33.76
17	TABELLARIA FENESTRATA	2950	200	15	17.79	3000	8.85
18	FRAGILARIA CONSTRUENS	110	7184	6	5.94	43104	4.74
19	SYNEDRA ACUS	120	200	27	6.12	5400	0.65
20	SYNEDRA ACUS	250	200	79	7.82	15800	3.95
21	SYNEDRA ULNA	1300	200	7	13.54	1400	1.82
22	ASTERIONELLA FORMOSA	160	200	186	6.74	37200	5.95
23	ASTERIONELLA FORMOSA	230	200	36	7.60	7200	1.66
24	SMALL DIATOMS	625	200	1	10.61	200	0.13
25	STEPHANODISCUS ASTREAE	4900	200	3	21.07	600	2.94
26	NITZSCHIA SP.	60	7184	1	4.86	7184	0.43
	GROUP 6						
27	RHODOMONAS MINUTA	90	7184	106	5.56	761504	68.54
28	RHODOMONAS MINUTA	400	7184	33	9.14	237072	94.83
29	CRYPTOMONAS EROSA	2000	200	19	15.63	3800	7.60
30	CRYPTOMONAS OVATA	5550	200	1	21.97	200	1.11
31	CRYPTOMONAS ROSTRATIFORM	5650	200	9	22.10	1800	10.17
32	KATABLEPHARIS OVALIS	180	7184	38	7.01	272992	49.14
	GROUP 7						
33	GYMNODINIUM SP.	19000	200	1	33.11	200	3.80
34	PERIDINIUM INCONSPICUM	3250	200	2	18.38	400	1.30
35	PERIDINIUM SP.	12500	200	1	28.79	200	2.50

########## SUMMARY ##########

GROUP NUMBER	CELLS/L	% OF TOTAL	BIOMASS mg/m^3	% OF TOTAL
1	0.00	0.00	0.00	0.00
2	57872.00	2.29	6.80	1.54
3	600.00	0.02	3.18	0.72
4	1063232.00	42.06	126.37	28.71
5	128272.00	5.07	64.88	14.74
6	1277368.00	50.53	231.38	52.56
7	800.00	0.03	7.60	1.73
TOTAL	2528144.00		440.21	

AVERAGE EQUIVELANT SPHEREICAL VOLUME= 12.46

DIVERSITY INDICES:

MARGALEF'S INDEX = 2.17

SHANNON-WEAVER INDEX = 3.02

CROSS 501

09 JUN 87 (DAY 160)

0 SPECIES=39
STRATA DEPTH=
STRATA VOL.=
FILE NAME = S0109JUN87

REC # SPECIES	CELL VOLUME	CORR. FACT.	RAW COUNT	ESD	CELLS /LITER	BIOMASS mg/m^3
GROUP 1						
3 APHANOCAPSA SP.	180	7184	1	7.01	7184	1.29
4 LYNGBYA SP.	380	7184	1	8.99	7184	2.73
GROUP 2						
5 PYRAMIDOMONAS TETRARHYN.	500	200	1	9.85	200	0.10
6 CHLAMYDOMONAS SPP.	110	7184	7	5.94	50288	5.53
7 PEDIASTRUM DUPLEX	20600	200	12	34.01	2400	49.44
8 MONORAPHIDIUM SETIFORME	100	7184	5	5.76	35920	3.59
9 MONORAPHIDIUM MINUTUM	350	7184	10	8.74	71840	25.14
10 ELAKATOTHRIX GELATINOSA	30	7184	1	3.86	7184	0.22
11 COSMARIUM SP.	3000	200	2	17.89	400	1.20
12 BOTRYOCOCCUS BRAUNII	24400	200	3	35.99	600	14.64
13 TETRAEDRON CAUDATA	15	7184	1	3.06	7184	0.11
14 EUDORINA SP.	380	7184	8	8.99	57472	21.84
GROUP 4						
15 SMALL CHRYSOPHYCEAE	50	7184	64	4.57	459776	22.99
16 LARGE CHRYSOPHYCEAE	380	7184	6	8.99	43104	16.38
17 KEPHYRION SP.	50	7184	1	4.57	7184	0.36
18 DINOBRYON SOCIALE	280	7184	4	8.12	28736	8.05
19 CHRYSOCHROMULINA BRIV.LAU.	380	7184	7	8.99	50288	19.11
20 STICHOGLOEA SPP.	270	7184	4	8.02	28736	7.76
21 SALPINGOECA SP.	380	7184	3	8.99	21552	8.19
GROUP 5						
22 MELOSIRA GRANULATA	17800	7184	1	32.39	7184	127.88
23 CYCLOTELLA SPP.	70	7184	9	5.11	64656	4.53
24 TABELLARIA FENESTRATA	2200	200	10	16.14	2000	4.40
25 TABELLARIA FLOCCULSA	17500	200	2	32.21	400	7.00
26 FRAGILARIA CROTONENSIS	120	200	20	6.12	4000	0.48
27 SYNEDRA ACUS	140	200	28	6.44	5600	0.78
28 SYNEDRA ACUS	320	200	62	8.49	12400	3.97
29 SYNEDRA ULNA	4790	200	1	20.91	200	0.96
30 ASTERIONELLA FORMOSA	140	200	172	6.44	34408	5.38
31 ASTERIONELLA FORMOSA	230	200	20	7.60	4000	0.92
32 STEPHANODISCUS ASTREAE	3700	200	10	19.19	2000	7.40
33 GYROZIGMA SP	7700	200	4	24.50	800	6.16
GROUP 6						
34 RHODOMONAS MINUTA	90	7184	34	5.56	244256	21.98
35 RHODOMONAS MINUTA	350	7184	19	8.74	136496	47.77
36 CRYPTOMONAS EROSA	2300	200	4	16.38	800	1.84
37 CRYPTOMONAS ROSTRATIFORM	3800	200	5	19.36	1000	3.80
38 KATABLEPHARIS OVALIS	150	7184	18	6.59	129312	19.40
GROUP 7						
39 GYMNODINIUM SP.	19000	200	1	33.11	200	3.80
40 PERIDINIUM INCONSPICUM	2200	200	4	16.14	800	1.76
41 PERIDINIUM SP.	12000	200	1	28.40	200	2.40

SUMMARY

GROUP NUMBER	CELLS/L	% OF TOTAL	BIOMASS mg/m^3	% OF TOTAL
1	14368.00	0.93	4.02	0.84
2	233488.00	15.14	121.81	25.31
3	0.00	0.00	0.00	0.00
4	639376.00	41.47	82.83	17.21
5	141640.00	9.19	169.85	35.29
6	511864.00	33.20	94.79	19.70
7	1200.00	0.08	7.96	1.65
TOTAL	1541936.00		481.27	

AVERAGE EQUIVELANT SPHEREICAL VOLUME= 13.39

DIVERSITY INDICES:

MARGALEF'S INDEX = 2.67

CROSS 2902

09 JUN 87 (DAY 160)

SPECIES=53
STRATA DEPTH=
STRATA VOL.=
FILE NAME = S0209JUN87

REC #	SPECIES	CELL VOLUME	CORR. FACT.	RAW COUNT	ESD	CELLS /LITER	BIOMASS ug/L^3
	GROUP 1						
3	APHANOTHECE SP.	90	7184	14	5.56	100576	9.05
4	GOMPHOSPHAERIA LACUSTRIS	5200	200	3	21.49	600	3.12
5	APHANIZOMENON FLOS-AQUAE	570	7184	3	10.29	21552	13.28
6	ANABAENA PLANCTONICA	11400	7184	27	27.92	193968	2211.24
7	ANABAENA CIRCINALIS	9600	7184	56	26.37	402304	3862.12
8	LYNGBYA SP.	440	7184	18	9.44	129312	56.90
	GROUP 2						
9	PEDIASTRUM DUPLEX	24000	200	87	35.79	17400	417.60
10	PEDIASTRUM TETRAS	15	7184	6	3.06	43104	0.65
11	OOCYSTIS SUBMARINA V LAC.	140	7184	78	6.44	560352	78.45
12	CHODATELLA SP.	110	7184	1	5.94	7184	0.79
13	SCENEDESMUS BREVISPINA	140	7184	4	6.44	28736	4.02
14	SCENEDESMUS SP.	150	7184	12	6.59	86208	12.93
15	DICTYOSPHAERIUM SIMPLEX	15	7184	70	3.06	502880	7.54
16	MONORAPHIDIUM SETIFORME	100	7184	4	5.76	28736	2.87
17	MONORAPHIDIUM CONTORTUM	40	7184	5	4.24	35920	1.44
18	CRUCIGENIELLA SPP.	15	7184	48	3.06	344832	5.17
19	CRUCIGENIELLA SPP.	110	7184	2	5.94	14368	1.58
20	KIRCHNERELLA LUNARIS	20	7184	20	3.37	143680	2.87
21	CLOSTERIUM SP.	1400	200	1	13.88	200	0.28
22	COSMARIUM SP.	4000	200	5	19.69	1000	4.00
23	ARTHRODESMUS INCUS	1000	200	1	12.41	200	0.20
24	STAURASTRUM PARADOXUM	10000	200	1	26.73	200	2.00
25	SPONDYLOSIUM PLANUM	110	7184	7	5.94	50288	5.53
26	MOUGEOTIA SP.	35	7184	4	4.06	28736	1.01
27	BOTRYOCOCCUS BRAUNII	5600	200	4	22.03	800	4.48
28	TETRAEDRON CAUDATA	15	7184	1	3.06	7184	0.11
	GROUP 3						
29	EUGLENA ACUS	19800	200	9	33.57	1800	35.64
	GROUP 4						
30	SMALL CHRYSOPHYCEAE	30	7184	69	4.57	495696	14.78
31	LARGE CHRYSOPHYCEAE	380	7184	13	8.99	93392	35.49
32	CHRYSOCHROMULINA PARVA	50	7184	20	4.57	143680	7.18
33	MALLOMONAS AKROKOMOS	200	7184	1	7.26	7184	1.44
34	DINOBRYON SERTULARIA	215	7184	3	7.43	21552	4.63
35	DINOBRYON SOCIALE	215	7184	26	7.43	186784	40.16
36	BITRICHIA CHODATII	50	7184	1	4.57	7184	0.36
37	CHRYSOCHROMULINA BRIV.LAU.	380	7184	10	8.99	71840	27.30
38	BICOECA LACUSTRIS	380	7184	2	8.99	14368	5.46
39	SALPINGOECA SP.	380	7184	9	8.99	64656	24.57
40	STELEXMONAS DICHOTOMA	90	7184	4	5.56	28736	2.59
	GROUP 5						
41	TABELLARIA FENESTRATA	400	200	76	9.14	15200	6.08
42	TABELLARIA FLOCCULSA	60000	200	1	48.57	200	12.00
43	FRAGILARIA CROTONENSIS	120	200	267	6.12	53400	6.41
44	SYNEDRA ACUS	140	200	124	6.44	24800	3.47
45	SYNEDRA ACUS	400	200	239	9.14	47800	19.12
46	SYNEDRA ULNA	5000	200	2	21.22	400	2.00
47	ASTERIONELLA FORMOSA	140	200	100	6.44	20000	2.80
48	ASTERIONELLA FORMOSA	220	200	49	7.49	9800	2.16
49	STEPHANODISCUS ASTREAE	3700	200	22	19.19	4400	16.28
	GROUP 6						
50	RHODOMONAS MINUTA	90	7184	5	5.56	35920	3.23
51	CRYPTOMONAS EROSA	1900	200	9	15.37	1800	3.42
52	CRYPTOMONAS ROSTRATIFORM	3800	200	2	19.36	400	1.52
53	KATABLEPHARIS OVALIS	150	7184	8	6.59	57472	8.62
	GROUP 7						
54	GYMNODINIUM SP.	19000	200	2	33.11	400	7.60

CONT'D : CROSS LAKE STN 2 09 JUNE 87

********** SUMMARY **********

GROUP NUMBER	CELLS/L	% OF TOTAL	BIOMASS mg/m^3	% OF TOTAL
1	848312.00	20.39	6154.71	87.67
2	1902008.00	45.71	553.53	7.88
3	1800.00	0.04	35.64	0.51
4	1135072.00	27.28	173.96	2.48
5	176000.00	4.23	70.32	1.00
6	95592.00	2.30	16.79	0.24
7	2400.00	0.06	15.60	0.22
TOTAL	4161184.00		7020.54	

****

AVERAGE EQUIVELANT SPHEREICAL VOLUME= 12.13

DIVERSITY INDICES:

MARGALEF'S INDEX = 3.41

SHANNON-WEAVER INDEX = 4.31

CROSS 803

09 JUN 87 (DAY 160)

SPECIES=47
STRATA DEPTH=
STRATA VOL.=
FILE NAME = S0309JUN87

REC #	SPECIES	CELL VOLUME	CORR. FACT.	RAW COUNT	RAW ESD	CELLS /LITER	BIOMASS mg/m^3
	GROUP 1						
3	GOMPHOSPHAERIA LACUSTRIS	1800	7184	1	15.09	7184	12.93
4	ANABAENA PLANCTONICA	10585	7184	60	27.24	431040	4562.56
5	ANABAENA CIRCINALIS	8244	7184	71	25.06	510064	4204.97
6	LYNGBYA SP.	265	7184	15	7.97	107760	28.56
7	ANABAENA CYLINDRICA	130	7184	10	6.29	71840	9.34
8		4100	7184	25	19.86	179600	736.36
	GROUP 2						
9	CHLAMYDOMONAS SPP.	110	7184	6	5.94	43104	4.74
10	PEDIASTRUM DUPLEX	22450	1000	51	35.00	51000	1144.95
11	OOCYSTIS SUBMARINA V LAC.	140	7184	18	6.44	129312	18.10
12	OOCYSTIS LACUSTRIS	225	7184	24	7.55	172416	38.79
13	TETRAEDRON MINIMUM	110	7184	3	5.94	21552	2.37
14	SCENEDESMUS QUADRICAUDA	75	7184	12	5.23	86208	6.47
15	SCENEDESMUS SP.	150	7184	20	6.59	143680	21.55
16	SCENEDESMUS SP.	240	7184	6	7.71	43104	10.34
17	DICTYOSPHAERIUM SIMPLEX	15	7184	48	3.06	344832	5.17
18	MONORAPHIDIUM SETIFORME	100	7184	1	5.76	7184	0.72
19	MONORAPHIDIUM CONTORTUM	35	7184	8	4.06	57472	2.01
20	CRUCIGENIELLA SPP.	15	7184	48	3.06	344832	5.17
21	CLOSTERIUM SP.	790	1000	4	11.47	4000	3.16
22	STAURASTRUM PARADOXUM	10000	1000	1	26.73	1000	10.00
23	SPONDYLOSIUM PLANUM	110	7184	5	5.94	35920	3.95
24	BOTRYOCOCCUS BRAUNII	24400	1000	2	35.99	2000	48.80
25	TETRAEDRON CAUDATA	15	7184	4	3.06	28736	0.43
	GROUP 4						
26	SMALL CHRYSOPHYCEAE	50	7184	143	4.57	1027312	51.37
27	LARGE CHRYSOPHYCEAE	380	7184	26	8.99	186784	70.98
28	CHRYSOCHROMULINA PARVA	50	7184	3	4.57	21552	1.08
29	HALLOMONAS CAUDATA	4900	1000	1	21.07	1000	4.90
30	DINOBRYON SUECICUM	215	7184	8	7.43	57472	12.34
31	DINOBRYON SOCIALE	240	7184	28	7.71	201152	48.28
32	OCHROMONAS SP.	525	7184	1	10.01	7184	3.77
33	CHRYSOCHROMULINA BRIV.LAU.	380	7184	5	8.99	35920	13.65
34	SALPINGOECA SP.	380	7184	12	8.99	86208	32.76
	GROUP 5						
35	MELOSIRA GRANULATA	21400	7184	1	34.45	7184	153.74
36	CYCLOTELLA SPP.	15	7184	3	3.06	21552	0.32
37	RHIZOSOLENIA ERIENSE	470	7184	2	9.65	14368	6.75
38	TABELLARIA FENESTRATA	1900	1000	14	15.37	14000	26.60
39	FRAGILARIA CROTONENSIS	120	1000	147	6.12	147000	17.64
40	SYNEDRA ACUS	140	1000	159	6.44	159000	22.26
41	SYNEDRA ACUS	300	1000	79	8.31	79000	23.70
42	SYNEDRA ULNA	4450	1000	1	20.41	1000	4.45
43	ASTERIONELLA FORMOSA	140	1000	89	6.44	89000	12.46
44	ASTERIONELLA FORMOSA	230	1000	24	7.60	24000	5.52
45	STEPHANODISCUS ASTREAE	4300	1000	3	20.18	3000	12.90
	GROUP 6						
46	RHODOMONAS MINUTA	90	7184	3	5.56	21552	1.94
47	CRYPTOMONAS EROSA	2300	1000	2	16.38	2000	4.60
48	KATABLEPHARIS OVALIS	150	7184	14	6.59	100576	15.09
	GROUP 7						
49	PERIDINIUM INCONSPICUM	2200	1000	2	16.14	2000	4.40

CONT'D: CROSS LAKE STN3 09 JUNE 87

********** SUMMARY **********

GROUP NUMBER	CELLS/L	% OF TOTAL	BIOMASS mg/m^3	% OF TOTAL
1	1307488.00	25.47	9554.71	83.57
2	1516352.00	29.54	1326.74	11.60
3	0.00	0.00	0.00	0.00
4	1624384.00	31.65	239.13	2.09
5	559104.00	10.89	286.34	2.50
6	124128.00	2.42	21.63	0.19
7	2000.00	0.04	4.40	0.04
TOTAL	5133656.00		11432.96	

AVERAGE EQUIVELANT SPHERICAL VOLUME= 11.62

DIVERSITY INDICES:

MARGALEF'S INDEX = 2.98

SHANNON-WEAVER INDEX = 4.37

```
**********************************
*  CROSS    S01                  *
*                                 *
*  08 JUL 87 (DAY 189)           *
**********************************
```

SPECIES=38
STRATA DEPTH=
STRATA VOL.=
FILE NAME = S010BJUL87

REC #	SPECIES	CELL VOLUME	CORR. FACT.	RAW COUNT	ESD	CELLS /LITER	BIOMASS mg/m^3
	********** GROUP 1 **********						
3	MICROCYSTIS VIRIDIS	2000	200	1	15.63	200	0.40
4	APHANOTHECE CLATHRATA	1800	7184	1	15.09	7184	12.93
5	GOMPHOSPHAERIA LACUSTRIS	1800	7184	1	15.09	7184	12.93
6	APHANIZOMENON FLOS-AQUAE	1800	200	18	15.09	3600	6.48
7	ANABAENA CIRCINALIS	7460	200	50	24.24	10000	74.60
	********** GROUP 2 **********						
8	CHLAMYDOMONAS SPP.	350	7184	6	8.74	43104	15.09
9	PEDIASTRUM DUPLEX	24400	200	8	35.99	1600	39.04
10	SCENEDESMUS QUADRICAUDA	75	7184	4	5.23	28736	2.16
11	MONORAPHIDIUM SETIFORME	104	7184	1	5.83	7184	0.75
12	MONORAPHIDIUM CONTORTUM	35	7184	4	4.06	28736	1.01
13	COELASTRUM CAMBRICUM	42200	200	1	43.20	200	8.44
14	PLANCTONEMA LAUTERBORNII	70	7184	16	5.11	114944	8.05
15	BOTRYOCOCCUS BRAUNII	81800	200	1	53.86	200	16.36
	********** GROUP 3 **********						
16	EUGLENA ACUS	20800	200	2	34.12	400	8.32
	********** GROUP 4 **********						
17	SMALL CHRYSOPHYCEAE	50	7184	67	4.57	481328	24.07
18	LARGE CHRYSOPHYCEAE	380	7184	1	8.99	7184	2.73
19	CHRYSOCHROMULINA PARVA	50	7184	30	4.57	215520	10.78
20	MALLOMONAS CAUDATA	5200	200	1	21.49	200	1.04
21	DINOBRYON BAVARICUM	90	7184	1	5.56	7184	0.65
22	UROGLENA AMERICANA	380	7184	2	8.99	14368	5.46
23	CHRYSOCHROMULINA BRIV.LAU.	380	7184	3	8.99	21552	8.19
24	BICOECA LACUSTRIS	380	7184	1	8.99	7184	2.73
25	SALPINGOECA SP.	380	7184	10	8.99	71840	27.30
	********** GROUP 5 **********						
26	MELOSIRA GRANULATA	26700	7184	3	37.08	21552	575.44
27	TABELLARIA FENESTRATA	2300	200	1	16.38	200	0.46
28	FRAGILARIA CROTONENSIS	125	200	40	6.20	8000	1.00
29	SYNEDRA ACUS	145	200	19	6.52	3800	0.55
30	SYNEDRA ACUS	400	200	47	9.14	9400	3.76
31	SYNEDRA ULNA	600	200	1	10.46	200	0.12
32	ASTERIONELLA FORMOSA	130	200	8	6.29	1600	0.21
33	ASTERIONELLA FORMOSA	230	200	20	7.60	4000	0.92
34	STEPHANODISCUS ASTREAE	3700	200	2	19.19	400	1.48
	********** GROUP 6 **********						
35	RHODOMONAS MINUTA	110	39683	98	5.94	3888934	427.78
36	RHODOMONAS MINUTA	350	7184	90	8.74	646560	226.30
37	CRYPTOMONAS EROSA	2100	200	118	15.89	23600	49.56
38	CRYPTOMONAS ROSTRATIFORM	3850	200	42	19.45	8400	32.34
39	KATABLEPHARIS OVALIS	160	7184	19	6.74	136496	21.84
	********** GROUP 7 **********						
40	PERIDINIUM INCONSPICUM	3200	200	1	18.28	200	0.64

CONT'D : CROSS LAKE STN1 08 JULY 87

********** SUMMARY **********

GROUP NUMBER	CELLS/L	% OF TOTAL	BIOMASS mg/m^3	% OF TOTAL
1	28168.00	0.48	107.34	6.58
2	224704.00	3.85	90.88	5.57
3	400.00	0.01	8.32	0.51
4	826360.00	14.17	82.94	5.08
5	49152.00	0.84	583.94	35.78
6	4703990.00	80.64	757.82	46.44
7	200.00	0.00	0.64	0.04
TOTAL	5832974.00		1631.88	

AVERAGE EQUIVELANT SPHEREICAL VOLUME= 14.64

DIVERSITY INDICES:

MARGALEF'S INDEX = 2.37

SHANNON-WEAVER INDEX = 1.93

```
##############################
# CROSS   B02                #
#                            #
# 08 JUL 87 (DAY 189)        #
##############################
```

SPECIES=46
STRATA DEPTH=
STRATA VOL.=
FILE NAME = S0208JUL87

REC #	SPECIES	CELL VOLUME	CORR. FACT.	RAW COUNT	ESD	CELLS /LITER	BIOMASS ug/m^3
	GROUP 1						
3	MICROCYSTIS VIRIDIS	800	39683	1	11.52	39683	31.75
4	APHANOTHECE SP.	900	39683	13	11.98	515879	464.29
5	GOMPHOSPHAERIA LACUSTRIS	5300	1000	6	21.63	6000	31.80
6	APHANIZOMENON FLOS-AQUAE	1850	39683	7	15.23	277781	513.89
7	ANABAENA PLANCTONICA	10260	39683	26	26.96	1031758	10585.84
8	ANABAENA CIRCINALIS	4450	39683	89	20.41	3531787	15716.45
9	LYNGBYA SP.	380	39683	30	8.99	1190490	452.39
10	ANABAENA CYLINDRICA	1700	39683	22	14.61	873026	1484.14
	GROUP 2						
11	CHLAMYDOMONAS SPP.	90	39683	8	5.56	317464	28.57
12	CHLAMYDOMONAS SPP.	440	39683	8	9.44	317464	139.68
13	PEDIASTRUM DUPLEX	24400	1000	72	35.99	72000	1756.80
14	OOCYSTIS SUBMARINA V LAC.	140	39683	7	6.44	277781	38.89
15	OOCYSTIS LACUSTRIS	200	39683	5	7.26	198415	39.68
16	SCENEDESMUS BREVISPINA	140	39683	2	6.44	79366	11.11
17	SCENEDESMUS SP.	230	39683	4	7.60	158732	36.51
18	DICTYOSPHAERIUM SIMPLEX	15	39683	56	3.06	2222248	33.33
19	MONORAPHIDIUM CONTORTUM	35	39683	4	4.06	158732	5.56
20	COELASTRUM CAMBRICUM	41600	1000	1	42.99	1000	41.60
21	KICHNERELLA LUNARIS	10	39683	4	2.67	158732	1.59
22	PLANCTONEMA LAUTERBORNII	30	39683	8	3.86	317464	9.52
23	CLOSTERIUM SP.	210	1000	1	7.37	1000	0.21
24	STAURASTRUM PARADOXUM	10000	1000	2	26.73	2000	20.00
25	BOTRYOCOCCUS BRAUNII	8180	1000	3	25.00	3000	24.54
26	TETRAEDRON CAUDATA	15	39683	1	3.06	39683	0.60
	GROUP 3						
27	EUGLENA ACUS	19800	1000	1	33.57	1000	19.80
28	TRACHELOMONAS HISPIDA	5275	1000	1	21.60	1000	5.28
	GROUP 4						
29	SMALL CHRYSOPHYCEAE	50	39683	14	4.57	555343	27.78
30	CHRYSOCHROMULINA PARVA	50	39683	21	4.57	833343	41.67
31	MALLOMONAS CAUDATA	5540	1000	3	21.95	3000	16.62
32	MALLOMONAS PSEUDOCORONATA	3400	1000	1	18.66	1000	3.40
33	BICOECA LACUSTRIS	380	39683	1	8.99	39683	15.08
34	SALPINGOECA SP.	380	39683	9	8.99	357147	135.72
	GROUP 5						
35	MELOSIRA GRANULATA	15100	39683	2	30.67	79366	1198.43
36	RHIZOSOLENIA ERIENSE	960	39683	1	12.24	39683	38.10
37	FRAGILARIA CROTONENSIS	130	1000	90	6.29	90000	11.70
38	SYNEDRA ACUS	140	1000	37	6.44	37000	5.18
39	SYNEDRA ACUS	400	1000	105	9.14	105000	42.00
40	SYNEDRA ULNA	2350	1000	1	16.50	1000	2.35
41	ASTERIONELLA FORMOSA	130	1000	16	6.29	16000	2.08
42	ASTERIONELLA FORMOSA	230	1000	6	7.60	6000	1.38
43	STEPHANODISCUS ASTREAE	3700	1000	19	19.19	19000	70.30
44	GYROZIGMA SP	7900	1000	6	24.71	6000	47.40
	GROUP 6						
45	RHODOMONAS MINUTA	90	39683	1	5.56	39683	3.57
46	CRYPTOMONAS EROSA	2300	1000	10	16.36	10000	23.00
47	KATABLEPHARIS OVALIS	150	39683	6	6.59	238098	35.71
	GROUP 7						

CROSS LAKE STN 3, 08 JULY 87 CONT'D

********** SUMMARY **********

GROUP NUMBER	CELLS/L	% OF TOTAL	BIOMASS mg/m^3	% OF TOTAL
1	7466404.00	52.29	29280.55	88.08
2	4325081.00	30.29	2188.19	6.58
3	2000.00	0.01	25.08	0.08
4	1789733.00	12.53	240.26	0.72
5	399049.00	2.79	1418.91	4.27
6	287781.00	2.02	62.29	0.19
7	9000.00	0.06	28.80	0.09
TOTAL	14279050.00		33244.08	

AVERAGE EQUIVELANT SPHEREICAL VOLUME= 13.87

DIVERSITY INDICES:

MARGALEF'S INDEX = 2.73

SHANNON-WEAVER INDEX = 3.88

```
##############################
# CROSS    803               #
#                            #
# 08 JUL 87 (DAY 189)        #
##############################
```

& SPECIES=42
STRATA DEPTH=
STRATA VOL.=
FILE NAME = S030BJUL87

REC #	SPECIES	CELL VOLUME	CORR. FACT.	RAW COUNT	ESD	CELLS /LITER	BIOMASS mg/m^3
	*********						
	GROUP 1						
	*********						
3	APHANOTHECE SP.	900	39683	19	11.98	753977	678.58
4	CHROOCOCCUS LIMNETICUS	50	39683	8	4.57	317464	15.87
5	ANABAENA PLANCTONICA	10300	1000	230	26.99	230000	2369.00
6	ANABAENA CIRCINALIS	5500	1000	33	21.90	33000	181.50
7	ANABAENA CYLINDRICA	1600	1000	1	14.51	1000	1.60
	*********						
	GROUP 2						
	*********						
8	CHLAMYDOMONAS SPP.	60	39683	1	4.86	39683	2.38
9	PEDIASTRUM DUPLEX	28700	1000	81	37.99	81000	2324.70
10	OOCYSTIS SUBMARINA V LAC.	100	39683	8	5.76	317464	31.75
11	OOCYSTIS LACUSTRIS	125	39683	12	6.20	476196	59.52
12	CHODATELLA SP.	350	39683	2	8.74	79366	27.78
13	SCENEDESMUS BREVISPINA	140	39683	4	6.44	158732	22.22
14	SCENEDESMUS SP.	125	39683	16	6.20	634928	79.37
15	SCENEDESMUS SP.	230	39683	4	7.60	158732	36.51
16	DICTYOSPHAERIUM SIMPLEX	15	39683	4	3.06	158732	2.38
17	MONORAPHIDIUM SETIFORME	100	39683	1	5.76	39683	3.97
18	MONORAPHIDIUM CONTORTUM	350	39683	1	8.74	39683	13.89
19	CRUCIGENIELLA SPP.	15	39683	4	3.06	158733	2.38
20	ELAKATOTHRIX GELATINOSA	40	39683	4	4.24	158732	6.35
21	CLOSTERIUM SP.	2600	1000	2	17.06	2000	5.20
22	STAURASTRUM PARADOXUM	10000	1000	1	26.73	1000	10.00
23	BOTRYOCOCCUS BRAUNII	7200	1000	1	23.96	1000	7.20
24	TETRAEDRON CAUDATA	15	39683	2	3.06	79366	1.19
	*********						
	GROUP 3						
	*********						
25	EUGLENA ACUS	4730	1000	1	20.83	1000	4.73
	*********						
	GROUP 4						
	*********						
26	SMALL CHRYSOPHYCEAE	50	39683	32	4.57	1269856	63.49
27	LARGE CHRYSOPHYCEAE	380	39683	5	8.99	198415	75.40
28	CHRYSOCHROMULINA PARVA	50	39683	5	4.57	198415	9.92
29	STELEXMONAS DICHOTOMS	90	39683	1	5.56	39683	3.57
	*********						
	GROUP 5						
	*********						
30	MELOSIRA GRANULATA	19000	39683	1	33.11	39683	753.98
31	TABELLARIA FENESTRATA	2100	1000	47	15.89	47000	98.70
32	FRAGILARIA CROTONENSIS	130	1000	50	6.29	50000	6.50
33	FRAGILARIA CONSTRUENS	100	39683	4	5.76	158732	15.87
34	SYNEDRA ACUS	140	1000	10	6.44	10000	1.40
35	SYNEDRA ACUS	400	1000	31	5.14	31000	12.40
36	SYNEDRA ULNA	590	1000	7	10.41	7000	4.13
37	ASTERIONELLA FORMOSA	130	1000	142	6.29	142000	18.46
38	ASTERIONELLA FORMOSA	230	1000	20	7.60	20000	4.60
39	STEPHANODISCUS ASTREAE	3700	1000	4	19.19	4000	14.80
40	GYROZIGMA SP	7600	1000	4	24.39	4000	30.40
	*********						
	GROUP 6						
	*********						
41	RHODOMONAS MINUTA	150	39683	1	6.59	39683	5.95
42	CRYPTOMONAS EROSA	2300	1000	1	16.38	1000	2.30
43	KATABLEPHARIS OVALIS	160	39683	4	6.74	158732	25.40
	*********						
	GROUP 7						
	*********						
44	PERIDINIUM INCONSPICUM	3100	1000	1	18.09	1000	3.10

CROSS LAKE STN 2 8 JULY 87 CONT'D

********** SUMMARY **********

GROUP NUMBER	CELLS/L	% OF TOTAL	BIOMASS mg/m^3	% OF TOTAL
1	1335441.00	21.06	3246.55	46.13
2	2585029.00	40.76	2636.79	37.46
3	1000.00	0.02	4.73	0.07
4	1706369.00	26.91	152.38	2.17
5	513415.00	8.10	961.24	13.66
6	199415.00	3.14	33.65	0.48
7	1000.00	0.02	3.10	0.04
TOTAL	6341669.00		7038.44	

AVERAGE EQUIVELANT SPHEREICAL VOLUME= 11.82

DIVERSITY INDICES:

MARGALEF'S INDEX = 2.62

SHANNON-WEAVER INDEX = 4.20

****
* CROSS ST1 *
*
* 04 AUG 87 (DAY 216) *
****

SPECIES=37
STRATA DEPTH=
STRATA VOL.=
FILE NAME = ST104AUG87

REC #	SPECIES	CELL VOLUME	CORR. FACT.	RAW COUNT	ESD	CELLS /LITER	BIOMASS mg/m^3
	GROUP 1						
3	MICROCYSTIS VIRIDIS	800	200	2	11.52	400	0.32
4	MERISMOPEDIA GLAUCA	115	7184	1	6.03	7184	0.83
5	APHANIZOMENON FLOS-AQUAE	3200	200	10	18.28	2000	6.40
6	ANABAENA PLANCTONICA	24920	200	5	36.24	1000	24.92
7	ANABAENA CIRCINALIS	4950	200	9	21.14	1800	8.91
8	LYNGBYA SP.	265	7184	1	7.97	7184	1.90
	GROUP 2						
9	CHLAMYDOMONAS SPP.	100	7184	3	5.76	21552	2.16
10	CHLAMYDOMONAS SPP.	350	7184	1	8.74	7184	2.51
11	GLOECOCOCCUS SCHROETERI	35	7184	22	4.06	158048	5.53
12	OOCYSTIS SUBMARINA V LAC.	100	7184	8	5.76	57472	5.75
13	OOCYSTIS LACUSTRIS	200	7184	4	7.26	28736	5.75
14	MONORAPHIDIUM SETIFORME	100	7184	1	5.76	7184	0.72
15	MONORAPHIDIUM CONTORTUM	45	7184	5	4.41	35920	1.62
16	CLOSTERIUM SP.	1800	200	2	15.09	400	0.72
17	MOUGEOTIA SP.	200	200	2	7.26	400	0.08
18	BOTRYOCOCCUS BRAUNII	17150	200	5	32.00	1000	17.15
19	SPIROGYRA SP	11150	200	1	27.72	200	2.23
	GROUP 4						
20	SMALL CHRYSOPHYCEAE	50	7184	33	4.57	237072	11.85
21	LARGE CHRYSOPHYCEAE	280	7184	3	8.12	21552	6.03
22	CHRYSOCHROMULINA PARVA	50	7184	16	4.57	114944	5.75
23	DINOBRYON SERTULARIA	250	7184	1	7.82	7184	1.80
24	CALFINGOECA SP.	380	7184	2	8.99	14368	5.46
25	STELEXMONAS DICHOTOMS	90	7184	1	5.56	7184	0.65
	GROUP 5						
26	MELOSIRA GRANULATA	13200	7184	2	29.32	14368	189.66
27	RHIZOSOLENIA ERIENSE	300	7184	3	8.31	21552	6.47
28	FRAGILARIA CROTONENSIS	130	200	100	6.29	20000	2.60
29	SYNEDRA ACUS	140	200	66	6.44	13200	1.85
30	SYNEDRA ACUS	400	200	24	9.19	4800	1.92
31	SYNEDRA ULNA	600	200	2	10.46	400	0.24
32	ASTERIONELLA FORMOSA	140	200	40	6.44	8000	1.12
33	ASTERIONELLA FORMOSA	230	200	2	7.60	400	0.09
34	STEPHANODISCUS ASTREAE	3300	200	1	18.47	200	0.66
	GROUP 6						
35	RHODOMONAS MINUTA	90	7184	97	5.56	696848	62.72
36	RHODOMONAS MINUTA	350	7184	12	8.74	86208	30.17
37	CRYPTOMONAS EROSA	2400	200	16	16.61	3200	7.68
38	KATABLEPHARIS OVALIS	150	7184	8	6.59	57472	8.62
	GROUP 7						
39	PERIDINIUM INCONSPICUM	3200	200	4	18.28	800	2.56

********** SUMMARY **********

GROUP NUMBER	CELLS/L	% OF TOTAL	BIOMASS mg/m^3	% OF TOTAL
1	19568.00	1.17	43.28	9.94
2	318096.00	19.08	44.21	10.15
3	0.00	0.00	0.00	0.00
4	402304.00	24.13	31.54	7.24
5	82920.00	4.97	204.60	46.99
6	843728.00	50.60	109.19	25.08
7	800.00	0.05	2.56	0.59
TOTAL	1667416.00		435.38	

AVERAGE EQUIVELANT SPHERICAL VOLUME= 11.43

DIVERSITY INDICES:
MARGALEF'S INDEX = 2.51

```
##############################
#  CROSS    ST2              #
#                            #
#  04 AUG 87 (DAY 216)       #
##############################
```

SPECIES=34
STRATA DEPTH=
STRATA VOL.=
FILE NAME = ST204AUG87

REC #	SPECIES	CELL VOLUME	CORR. FACT.	RAW COUNT	ESD	CELLS /LITER	BIOMASS mg/m^3
	GROUP 1						
3	MICROCYSTIS VIRIDIS	800	1000	25	11.52	25000	20.00
4	APHANOTHECE SP.	1800	39683	28	15.09	1111124	2000.02
5	CHROOCOCCUS LIMNETICUS	110	39683	8	5.94	317464	34.92
6	APHANIZOMENON FLOS-AQUAE	3100	1000	10	18.09	10000	31.00
7	ANABAENA PLANCTONICA	20500	1000	375	33.96	375000	7687.50
8	ANABAENA CIRCINALIS	4900	1000	17	21.07	17000	83.30
9	LYNGBYA SP.	130	39683	5	6.29	198415	25.79
	GROUP 2						
10	PEDIASTRUM DUPLEX	36100	1000	51	41.00	51000	1841.10
11	OOCYSTIS SUBMARINA V LAC.	100	39683	2	5.76	79366	7.94
12	OOCYSTIS LACUSTRIS	200	39683	12	7.26	476196	95.24
13	SCENEDESMUS QUADRICAUDA	100	39683	16	5.76	634928	63.49
14	SCENEDESMUS BREVISPINA	140	39683	6	6.44	238098	33.33
15	SCENEDESMUS SP.	125	39683	4	6.20	158732	19.84
16	COELASTRUM CAMBRICUM	7200	1000	1	23.96	1000	7.20
17	CLOSTERIUM SP.	76340	1000	1	52.63	1000	76.34
18	STAURASTRUM PAPADOXUM	10000	1000	3	26.73	3000	30.00
19	BOTRYOCOCCUS BRAUNII	54300	1000	14	46.98	14000	760.20
	GROUP 3						
20	EUGLENA ACUS	7825	1000	2	24.63	2000	15.65
	GROUP 4						
21	SMALL CHRYSOPHYCEAE	50	39683	6	4.57	238098	11.90
22	CHRYSOCHROMULINA PARVA	50	39683	40	4.57	1587320	79.37
23	SALPINGOECA SP.	380	39683	8	8.99	317464	120.64
	GROUP 5						
24	MELOSIRA GRANULATA	15600	39683	1	31.00	39683	619.05
25	TABELLARIA FENESTRATA	2200	1000	10	16.19	10000	22.00
26	FRAGILARIA CROTONENSIS	130	1000	100	6.29	100000	13.00
27	SYNEDRA ACUS	140	1000	32	6.44	32000	4.48
28	SYNEDRA ACUS	400	1000	36	9.14	36000	14.40
29	SYNEDRA ULNA	2900	1000	7	17.69	7000	20.30
30	ASTERIONELLA FORMOSA	140	1000	6	6.44	6000	0.84
31	ASTERIONELLA FORMOSA	230	1000	8	7.60	8000	1.84
32	STEPHANODISCUS ASTREAE	3700	1000	21	19.19	21000	77.70
33	SYROZIGMA SP	7700	1000	16	24.50	16000	123.20
	GROUP 6						
34	RHODOMONAS MINUTA	90	39683	7	5.56	277781	25.00
35	CRYPTOMONAS EROSA	2375	1000	13	16.55	13000	30.88
	GROUP 7						
36	PERIDINIUM INCONSPICUM	3200	1000	2	18.28	2000	6.40

CROSS ST3

04 AUG 87 (DAY 216)

SPECIES=49
STRATA DEPTH=
STRATA VOL.=
FILE NAME = ST304AUG87

REC #	SPECIES	CELL VOLUME	CORR. FACT.	RAW COUNT	ESD	CELLS /LITER	BIOMASS ug/m^3
	GROUP 1						
3	MICROCYSTIS VIRIDIS.	800	200	26	11.52	5200	4.16
4	APHANOTHECE SP.	1800	7184	1	15.09	7184	12.93
5	CHROCOCCUS LIMNETICUS	110	7184	56	5.94	402304	44.25
6	GOMPHOSPHAERIA LACUSTRIS	1800	7184	3	15.09	21552	38.79
7	ANABAENA PLANCTONICA	15227	200	55	30.75	11000	167.50
8	ANABAENA CIRCINALIS	4908	200	8	21.08	1600	7.85
9	LYNGBYA SP.	140	7184	3	6.44	21552	3.02
	GROUP 2						
10	CHLAMYDOMONAS SPP.	100	7184	1	5.76	7184	0.72
11	GLOEDCOCCUS SCHROETERI	35	7184	13	4.06	93392	3.27
12	PEDIASTRUM DUPLEX	28700	200	101	37.99	20200	579.74
13	PEDIASTRUM TETRAS	35	7184	4	4.06	28736	1.01
14	OOCYSTIS SUBMARINA V LAC.	100	7184	9	5.76	64656	6.47
15	OOCYSTIS LACUSTRIS	200	7184	61	7.26	438224	87.64
16	CHODATELLA SP.	160	7184	1	6.74	7184	1.15
17	SCENEDESMUS QUADRICAUDA	100	7184	87	5.76	625008	62.50
18	SCENEDESMUS BREVISPINA	140	7184	22	6.44	158048	22.13
19	SCENEDESMUS SP.	150	7184	366	6.59	2629344	394.40
20	DICTYOSPHAERIUM SIMPLEX	15	7184	16	3.06	114944	1.72
21	MONORAPHIDIUM CONTORTUM	35	7184	4	4.06	28736	1.01
22	CRUCIGENIELLA SPP.	15	7184	4	3.06	28736	0.43
23	COELASTRUM CAMBRICUM	17200	200	1	32.03	200	3.44
24	CLOSTERIUM SP.	12600	200	1	28.87	200	2.52
25	COSMARIUM SP.	290	200	2	8.21	400	0.12
26	STAURASTRUM CUSPITATUM	7500	200	1	24.29	200	1.50
27	STAURASTRUM PARADOXUM	10000	200	1	26.73	200	2.00
28	SPONDYLOSIUM PLANUM	100	7184	1	5.76	7184	0.72
29	BOTRYOCOCCUS BRAUNII	41600	200	23	42.99	4600	191.36
	GROUP 3						
30	EUGLENA ACUS	11900	200	3	28.33	600	7.14
	GROUP 4						
31	SMALL CHRYSOPHYCEAE	50	7184	16	4.57	114944	5.75
32	LARGE CHRYSOPHYCEAE	380	7184	5	8.99	35920	13.65
33	CHRYSOCHROMULINA PARVA	50	7184	15	4.57	107760	5.39
34	SALPINGOECA SP.	380	7184	2	8.99	14368	5.46
	GROUP 5						
35	MELOSIRA GRANULATA	24500	7184	3	36.03	21552	528.02
36	CYCLOTELLA SPP.	35	7184	5	4.06	35920	1.26
37	TABELLARIA FENESTRATA	2200	200	26	16.14	5200	11.44
38	FRAGILARIA CROTONENSIS	2050	200	110	15.76	22000	45.10
39	SYNEDRA ACUS	130	200	29	6.29	5800	0.75
40	SYNEDRA ACUS	400	200	39	9.14	7800	3.12
41	SYNEDRA ULNA	2350	200	17	16.50	3400	7.99
42	ASTERIONELLA FORMOSA	140	200	25	6.44	5000	0.70
43	LARGE DIATOMS	7300	200	1	24.07	200	1.46
44	STEPHANODISCUS ASTREAE	3660	200	6	19.12	1200	4.39
45	SURIRELLA SP	10800	200	24	27.42	4800	51.84
46	GYROZIGMA SP	7900	200	52	24.71	10400	82.16
	GROUP 6						
47	RHODOMONAS MINUTA	350	7184	3	8.74	21552	7.54
48	CRYPTOMONAS EROSA	2400	200	2	16.61	400	0.96
49	KATABLEPHARIS OVALIS	150	7184	6	6.59	43104	6.47
	GROUP 7						
50	PERIDINIUM INCONSPICUM	3200	200	5	18.28	1000	3.20

CROSS LAKE STN 2 8/AUG 87 CONT'D

********** SUMMARY **********

GROUP NUMBER	CELLS/L	% OF TOTAL	BIOMASS mg/m^3	% OF TOTAL
1	2054003.00	31.97	9882.54	70.57
2	1657320.00	25.80	2934.68	20.96
3	2000.00	0.03	15.65	0.11
4	2142882.00	33.35	211.91	1.51
5	275683.00	4.29	896.81	6.40
6	290781.00	4.53	55.88	0.40
7	2000.00	0.03	6.40	0.05
TOTAL	6424669.00		14003.87	

****

AVERAGE EQUIVELANT SPHEREICAL VOLUME= 16.54

DIVERSITY INDICES:

MARGALEF'S INDEX = 2.11

SHANNON-WEAVER INDEX = 3.62

CROSS LAKE STN3 04AUG87 TABLE CONT'D

SUMMARY

GROUP NUMBER	CELLS/L	% OF TOTAL	BIOMASS mg/m^3	% OF TOTAL
1	470392.00	9.06	278.51	11.39
2	4257376.00	82.02	1363.84	55.75
3	600.00	0.01	7.14	0.29
4	272992.00	5.26	30.24	1.24
5	123272.00	2.37	738.24	30.18
6	65056.00	1.25	14.97	0.61
7	1200.00	0.02	13.20	0.54
TOTAL	5190888.00		2446.13	

AVERAGE EQUIVELANT SPHEREICAL VOLUME= 14.95

DIVERSITY INDICES:
MARGALEF'S INDEX = 3.10
SHANNON-WEAVER INDEX = 2.83

```
##############################
# CROSS    ST1               #
#                            #
# 01 SEP 87 (DAY 244)        #
##############################
```

SPECIES=45
STRATA DEPTH=
STRATA VOL.=
FILE NAME = ST101SEP87

REC #	SPECIES	CELL VOLUME	CORR. FACT.	RAW COUNT	ESD	CELLS /LITER	BIOMASS mg/m^3
	GROUP 1						
3	GOMPHOSPHAERIA LACUSTRIS	41600	200	1	42.99	200	8.32
4	APHANIZOMENON FLOS-AQUAE	2250	200	232	16.26	46400	104.40
5	ANABAENA PLANCTONICA	8140	200	55	24.96	11000	89.54
6	ANABAENA CIRCINALIS	5900	200	45	22.42	9000	53.10
7	LYNGBYA SP.	265	7184	16	7.97	114944	30.46
	GROUP 2						
8	CHLAMYDOMONAS SPP.	270	7184	1	8.02	7184	1.94
9	PEDIASTRUM DUPLEX	41600	200	21	42.99	4200	174.72
10	OOCYSTIS SUBMARINA V LAC.	100	7184	4	5.76	28736	2.87
11	OOCYSTIS LACUSTRIS	200	7184	5	7.26	35920	7.18
12	SCENEDESMUS BREVISPINA	100	7184	6	5.76	43104	4.31
13	SCENEDESMUS SP.	140	7184	4	6.44	28736	4.02
14	DICTYOSPHAERIUM SIMPLEX	150	7184	12	6.59	86208	12.93
15	MONORAPHIDIUM SETIFORME	100	7184	6	5.76	43104	4.31
16	MONORAPHIDIUM CONTORTUM	100	7184	21	5.76	150864	15.09
17	CRUCIGENIELLA SPP.	35	7184	16	4.06	114944	4.02
18	CLOSTERIUM SP.	450	200	3	9.51	600	0.27
19	STAURASTRUM PARADOXUM	7500	200	1	24.29	200	1.50
20	BOTRYOCOCCUS BRAUNII	28700	200	8	37.99	1600	45.92
21	SPIROGRYA SP	2800	200	3	17.49	600	1.68
22	SPIROGRYA SP	99000	200	6	57.40	1200	118.80
	GROUP 4						
23	SMALL CHRYSOPHYCEAE	50	7184	14	4.57	100576	5.03
24	LARGE CHRYSOPHYCEAE	380	7184	2	8.99	14368	5.46
25	CHRYSOCHROMULINA PARVA	50	7184	7	4.57	50288	2.51
26	DINOBRYON SERTULARIA	250	7184	1	7.82	7184	1.80
27	CHRYSOCHROMULINA BRIV.LAU.	380	7184	6	8.99	43104	16.38
28	DICOECA LACUSTRIS	380	7184	2	8.99	14368	5.46
	GROUP 5						
29	MELOSIRA GRANULATA	18300	7184	1	32.70	7184	131.47
30	CYCLOTELLA SPP.	35	7184	7	4.06	50288	1.76
31	TABELLARIA FENESTRATA	2190	200	13	16.11	2600	5.69
32	FRAGILARIA CROTONENSIS	400	200	90	9.14	18000	7.20
33	SYNEDRA ACUS	140	200	76	6.44	15200	2.13
34	SYNEDRA ACUS	400	200	137	9.14	27400	10.96
35	SYNEDRA ULNA	2350	200	10	16.50	2000	4.70
36	ASTERIONELLA FORMOSA	140	200	354	6.44	70800	9.91
37	ASTERIONELLA FORMOSA	230	200	41	7.60	8200	1.89
38	STEPHANODISCUS ASTREAE	3700	200	20	19.19	4000	14.80
39	SURIRELLA SP	45550	200	1	44.37	200	9.11
40	GYROZIGMA SP	7900	200	4	24.71	800	6.32
	GROUP 6						
41	RHODOMONAS MINUTA	70	7184	101	5.11	725584	50.79
42	RHODOMONAS MINUTA	350	7184	40	8.74	287360	100.58
43	CRYPTOMONAS EROSA	2280	200	48	16.33	9600	21.89
44	KATABLEPHARIS OVALIS	150	7184	41	6.59	294544	44.18
	GROUP 7						
45	GYMNODINIUM SP.	19100	200	1	33.16	200	3.82
46	PERIDINIUM INCONSPICUM	3700	200	7	19.19	1400	5.18
47	CERATIUM HIRUNDENELLA	50000	200	1	45.71	200	10.00

CROSS LAKE STN #1 01 SEPT 87 CONT'D

********** SUMMARY **********

GROUP NUMBER	CELLS/L	% OF TOTAL	BIOMASS mg/m^3	% OF TOTAL
1	181544.00	7.31	285.82	24.55
2	547200.00	22.03	399.57	34.32
3	0.00	0.00	0.00	0.00
4	229888.00	9.25	36.64	3.15
5	206672.00	8.32	205.94	17.69
6	1317088.00	53.02	217.44	18.67
7	1800.00	0.07	19.00	1.63
TOTAL	2484192.00		1164.40	

AVERAGE EQUIVELANT SPHERICAL VOLUME= 16.33

DIVERSITY INDICES:

MARGALEF'S INDEX = 2.99

SHANNON-WEAVER INDEX = 3.81

CROSS 46 ST2

01 SEP 87 (DAY 244)

SPECIES=34
STRATA DEPTH=
STRATA VOL.=
FILE NAME = ST2015EP87

REC #	SPECIES	CELL VOLUME	CORR. FACT.	RAW COUNT	RAW ESD	CELLS /_ITER	BIOMASS mg/m^3
	GROUP 1						
3	MICROCYSTIS VIRIDIS	900	1000	102	11.98	102000	91.80
4	CHROOCOCCUS LIMNETICUS	100	39683	40	5.76	1587320	158.73
5	COMPHOSPHAERIA LACUSTRIS	11300	1000	6	28.00	6000	67.80
6	APHANIZOMENON FLOS-AQUAE	2700	1000	89	17.28	89000	240.30
7	ANABAENA PLANCTONICA	10260	1000	60	26.96	60000	615.60
8	ANABAENA CIRCINALIS	4400	1000	8	20.33	8000	35.20
	GROUP 2						
9	PEDIASTRUM TETRAS	41600	1000	44	42.99	44000	1830.40
10	OOCYSTIS SUBMARINA V LAC.	100	39683	16	5.76	634928	63.49
11	OOCYSTIS SUBMARINA V LAC.	240	39683	19	7.71	753977	180.95
12	PAULSCHULZIA PSEUDEVOLVOX	100	39683	12	5.76	476196	47.62
13	CHODATELLA SP.	100	39683	1	5.76	39683	3.97
14	SCENEDESMUS BREVISPINA	150	39683	20	6.59	793660	119.05
15	SCENEDESMUS SP.	140	39683	14	6.44	555562	77.78
16	CLOSTERIUM SP.	8800	1000	1	25.62	1000	8.80
17	SPONDYLOSIUM PLANUM	150	39683	1	6.59	39683	5.95
18	BOTRYOCOCCUS BRAUNII	24500	1000	8	36.03	8000	196.00
	GROUP 4						
19	SMALL CHRYSOPHYCEAE	50	39683	3	4.57	119049	5.95
20	CHRYSOCHROMULINA PARVA	50	39683	7	4.57	277781	13.89
21	MALLOMONAS PSEUDOCORONATA	1400	1000	1	13.88	1000	1.40
22	SALPINGOECA SP.	380	39683	1	8.99	39683	15.08
	GROUP 5						
23	MELOSIRA GRANULATA	13000	39683	5	29.17	198415	2579.40
24	TABELLARIA FENESTRATA	2200	1000	30	16.14	30000	66.00
25	FRAGILARIA CROTONENSIS	130	1000	320	6.29	320000	41.60
26	SYNEDRA ACUS	145	1000	13	6.52	13000	1.89
27	SYNEDRA ACUS	400	1000	21	9.14	21000	8.40
28	SYNEDRA ULNA	2700	1000	7	17.28	7000	18.90
29	ASTERIONELLA FORMOSA	140	1000	72	6.44	72000	10.08
30	ASTERIONELLA FORMOSA	230	1000	3	7.60	3000	0.69
31	STEPHANODISCUS ASTREAE	3700	1000	14	19.19	14000	51.80
32	GYROZIGMA SP	7900	1000	14	24.71	14000	110.60
	GROUP 6						
33	CRYPTOMONAS EROSA	4200	1000	2	20.02	2000	8.40
34	KATABLEPHARIS OVALIS	150	39683	2	6.59	79366	11.90
	GROUP 7						
35	PERIDINIUM INCONSPICUM	3200	1000	3	18.28	3000	9.60
36	CERATIUM HIRUNDENELLA	50000	1000	1	45.71	1000	50.00

SUMMARY

GROUP NUMBER	CELLS/L	% OF TOTAL	BIOMASS mg/m^3	% OF TOTAL
1	1852320.00	28.88	1210.63	17.93%
2	3346689.00	52.18	2534.02	37.54%
3	0.00	0.00	0.00	0.00
4	437513.00	6.82	36.32	0.54%
5	692415.00	10.79	2889.35	42.80%
6	81366.00	1.27	20.30	0.30
7	4000.00	0.06	59.60	0.88%
TOTAL	6414303.00		6750.22	

AVERAGE EQUIVELANT SPHEREICAL VOLUME= 15.43

DIVERSITY INDICES:

MARGALEF'S INDEX = 2.11

CROSS ST3

01 SEP 87 (DAY 244)

SPECIES=34
STRATA DEPTH=
STRATA VOL.=
FILE NAME = ST301SEP87

REC #	SPECIES	CELL VOLUME	CORR. FACT.	RAW COUNT	ESD	CELLS /LITER	BIOMASS mg/m^3
	GROUP 1						
3	MICROCYSTIS VIRIDIS	800	1000	4	11.52	4000	3.20
4	APHANOTHECE SP.	1800	39683	38	15.09	1507954	2714.32
5	CHROOCOCCUS LIMNETICUS	110	39683	7	5.94	277781	30.56
6	GOMPHOSPHAERIA LACUSTRIS	11500	1000	1	28.00	1000	11.50
7	APHANIZOMENON FLOS-AQUAE	3100	1000	2	18.09	2000	6.20
8	ANABAENA PLANCTONICA	9400	1000	10	26.18	10000	94.00
9	ANABAENA CIRCINALIS	6200	1000	7	22.79	7000	43.40
	GROUP 2						
10	PEDIASTRUM DUPLEX	54300	1000	110	46.98	110000	5973.00
11	OOCYSTIS SUBMARINA V LAC.	100	39683	15	5.76	595245	59.52
12	OOCYSTIS LACUSTRIS	220	39683	8	7.49	317464	69.84
13	SCENEDESMUS QUADRICAUDA	100	39683	16	5.76	634928	63.49
14	SCENEDESMUS BREVISPINA	130	39683	40	6.29	1587320	206.35
15	SCENEDESMUS SP.	150	39683	151	6.59	5992133	898.82
16	COELASTRUM CAMBRICUM	11500	1000	1	28.00	1000	11.50
17	STAURASTRUM CUSPITATUM	7500	1000	1	24.29	1000	7.50
18	STAURASTRUM PARADOXUM	10000	1000	5	26.73	5000	50.00
19	SPONDYLOSIUM PLANUM	150	39683	1	6.59	39683	5.95
20	BOTRYOCOCCUS BRAUNII	41600	1000	17	42.99	17000	707.20
	GROUP 4						
21	SMALL CHRYSOPHYCEAE	70	39683	2	5.11	79366	5.56
22	SALPINGOECA SP.	380	39683	4	8.99	158732	60.32
	GROUP 5						
23	MELOSIRA GRANULATA	17100	39683	6	31.96	238098	4071.48
24	TABELLARIA FENESTRATA	2200	1000	58	16.14	58000	127.60
25	FRAGILARIA CROTONENSIS	130	1000	260	6.29	260000	33.80
26	SYNEDRA ACUS	140	1000	15	6.44	15000	2.10
27	SYNEDRA ACUS	400	1000	53	9.14	53000	21.20
28	SYNEDRA ULNA	8100	1000	8	24.92	8000	64.80
29	ASTERIONELLA FORMOSA	130	1000	178	6.28	178000	23.14
		230	1000	39	7.60	39000	8.97
31	STEPHANODISCUS ASTREAE	3700	1000	16	19.19	16000	59.20
32	SURIRELLA SP	13100	1000	1	25.25	1000	13.10
33	GYROZIGMA SP	7700	1000	33	24.50	33000	254.10
	GROUP 6						
34	RHODOMONAS MINUTA	90	39683	14	5.56	555562	50.00
35	CRYPTOMONAS EROSA	3200	1000	7	18.28	7000	22.40
	GROUP 7						
36	CERATIUM HIRUNDENELLA	50000	1000	1	45.71	1000	50.00

SUMMARY

GROUP NUMBER	CELLS/L	% OF TOTAL	BIOMASS mg/m^3	% OF TOTAL
1	1809735.00	14.13	2903.17	18.35
2	9300773.00	72.60	8053.18	50.89
3	0.00	0.00	0.00	0.00
4	238098.00	1.86	65.87	0.42
5	899098.00	7.02	4679.49	29.57
6	563562.00	4.39	72.40	0.46
7	1000.00	0.01	50.00	0.32
TOTAL	12811266.00		15824.12	

AVERAGE EQUIVELANT SPHEREICAL VOLUME= 17.66

DIVERSITY INDICES:

MARGALEF'S INDEX = 2.02

SHANNON-WEAVER INDEX = 2.83

APPENDIX B2. Phytoplankton data from Rat Lake, 1987.

Group	
1	Cyanophyceae - blue greens
2	Chlorophyceae - greens
3	Euglenophyceae - euglenophytes
4	Chrysophyceae - chrysophytes
5	Bacillariophyceae - diatoms
6	Cryptophyceae - cryptophytes
7	Peridineae - dinoflagellates

RAT ST1

14 MAY 87 (DAY 134)

SPECIES=31
STRATA DEPTH=
STRATA VOL.=
FILE NAME = ST114MA/87

REC #	SPECIES	CELL VOLUME	CORR. FACT.	RAW COUNT	ESD	CELLS /LITER	BIOMASS mg/m^3
	GROUP 1						
3	APHANIZOMENON FLOS-AQUAE	5860	200	24	22.37	4800	28.13
4	ANABAENA PLANCTONICA	10000	200	2	26.73	400	4.00
	GROUP 2						
5	CHLAMYDOMONAS SPP.	525	7184	1	10.01	7184	3.77
6	CHLOROGONIUM MAXIMUM	20710	200	6	34.07	1200	24.85
7	PEDIASTRUM DUPLEX	90000	200	3	55.60	600	54.00
8	SCENEDESMUS SP.	150	7184	4	6.59	28736	4.31
9	MONORAPHIDIUM SETIFORME	110	7184	10	5.94	71840	7.90
10	MONORAPHIDIUM CONTORTUM	40	7184	11	4.24	79024	3.16
11	CLOSTERIUM SP.	1500	200	4	14.20	800	1.20
	GROUP 3						
12	TRACHELOMONAS VOLVOCINA	4850	200	1	21.00	200	0.97
	GROUP 4						
13	SMALL CHRYSOPHYCEAE	50	7184	25	4.57	179600	8.98
14	CHRYSOCHROMULINA PARVA	50	7184	24	4.57	172416	8.62
15	SYNURA SPAGNICOLA	61100	200	1	48.87	200	12.22
16	STELEXMONAS DICHOTOMS	100	7184	2	5.76	14368	1.44
	GROUP 5						
17	MELOSIRA GRANULATA	39200	7184	3	42.15	21552	844.84
18	MELOSIRA ITALICA	25100	7184	8	36.33	57472	1442.55
19	TABELLARIA FENESTRATA	2100	200	3	15.89	600	1.26
20	SYNEDRA ACUS	145	200	12	6.52	2400	0.35
21	SYNEDRA ACUS	400	200	39	9.14	7800	3.12
22	SYNEDRA ULNA	4500	200	4	20.48	800	3.60
23	ASTERIONELLA FORMOSA	140	200	81	6.44	16200	2.27
24	ASTERIONELLA FORMOSA	240	200	62	7.71	12400	2.98
25	STEPHANODISCUS ASTREAE	3700	200	5	19.19	1000	3.70
	GROUP 6						
26	RHODOMONAS MINUTA	90	7184	77	5.56	353168	49.79
27	RHODOMONAS MINUTA	350	7184	19	8.74	136496	47.77
28	CRYPTOMONAS EROSA	3200	200	75	18.28	15000	48.00
29	CRYPTOMONAS ROSTRATIFORM	5400	200	29	21.77	5800	31.32
30	KATABLEPHARIS OVALIS	140	7184	17	6.44	122128	17.10
	GROUP 7						
31	GYMNODINIUM SP.	13200	200	25	29.32	5000	66.00
32	PERIDINIUM INCONSPICUM	3200	200	2	18.28	400	1.28
33	PERIDINIUM ACICULIFERRIM	10000	200	37	26.73	7400	74.00

SUMMARY

GROUP NUMBER	CELLS/L	% OF TOTAL	BIOMASS mg/m^3	% OF TOTAL
1	5200.00	0.34	32.13	1.15
2	189384.00	12.40	99.20	3.54
3	200.00	0.01	0.97	0.03
4	366584.00	24.01	31.26	1.11
5	120224.00	7.87	2304.66	82.21
6	832592.00	54.53	193.98	6.92
7	12800.00	0.84	141.28	5.04
TOTAL	1526984.00		2803.47	

AVERAGE EQUIVELANT SPHEREICAL VOLUME= 18.18

DIVERSITY INDICES:
MARGALEF'S INDEX = 2.11
SHANNON-WEAVER INDEX = 3.16

****
* RAT ST2 *
* *
* 14 MAY 87 (DAY 134) *
****

\# SPECIES=39
STRATA DEPTH=
STRATA VOL.=
FILE NAME = ST214MAY87

REC #	SPECIES	CELL VOLUME	CORR. FACT.	RAW COUNT	ESD	CELLS /LITER	BIOMASS mg/m^3
	********** GROUP 1 **********						
3	CHROOCOCCUS LIMNETICUS	100	7184	24	5.76	172416	17.24
4	APHANIZOMENON FLOS-AQUAE	5300	200	21	21.63	4200	22.26
5	ANABAENA PLANCTONICA	14650	200	10	30.36	2000	29.30
6	ANABAENA CIRCINALIS	5690	200	9	22.15	1800	10.24
7	LYNGBYA SP.	310	7184	3	8.40	21552	6.68
	********** GROUP 2 **********						
8	CHLAMYDOMONAS SPP.	200	7184	1	7.26	7184	1.44
9	CHLAMYDOMONAS SPP.	650	7184	1	10.75	7184	4.67
10	CHLOROGONIUM MAXIMUM	15700	200	1	31.07	200	3.14
11	PEDIASTRUM DUPLEX	54200	200	6	46.98	1200	65.16
12	COCYSTIS LACUSTRIS	1000	7184	3	12.41	21552	21.55
13	MONORAPHIDIUM SETIFORME	68	7184	8	5.06	57472	3.91
14	MONORAPHIDIUM CONTORTUM	35	7184	2	4.06	14368	0.50
15	CRUCIGENIELLA SPP.	15	7184	8	3.06	57472	0.86
16	CLOSTERIUM SP.	1700	200	1	14.81	200	0.34
17	TEILINGIA GRANUTATUM	10	7184	1	2.67	7184	0.07
18	ANKYRA JUDAI	60	7184	1	4.86	7184	0.43
19		15	7184	2	3.06	14368	0.22
	********** GROUP 3 **********						
20	TRACHELOMONAS VOLVOCINA	4850	200	1	21.00	200	0.97
	********** 3ROUP 4 **********						
21	SMALL CHRYSOPHYCEAE	50	7184	10	4.57	71840	3.59
22	LARGE CHRYSOPHYCEAE	380	7184	1	8.99	7184	2.73
23	CHRYSOCHROMULINA PARVA	50	7184	21	4.57	150864	7.54
24	SYNURA SPAGNICOLA	24800	200	2	36.18	400	9.92
	********** GROUP 5 **********						
25	MELOSIRA GRANULATA	71700	7184	9	51.34	64656	4635.84
26	MELOSIRA ITALICA	45800	7184	3	44.31	21552	987.08
27	MELOSIRA SP.	64100	7184	1	49.65	7184	460.49
28	FRAGILARIA CROTONENSIS	130	200	20	6.29	4000	0.52
29	SYNEDRA ACUS	130	200	51	6.29	10200	1.33
30	SYNEDRA ACUS	400	200	16	9.14	3200	1.28
31	SYNEDRA ULNA	3600	200	2	19.02	400	1.44
32	ASTERIONELLA FORMOSA	240	200	32	7.71	6400	1.54
33	ASTERIONELLA FORMOSA	2100	200	33	15.89	6600	13.86
34	STEPHANODISCUS ASTREAE	3700	200	10	19.19	2000	7.40
	********** GROUP 6 **********						
35	RHODOMONAS MINUTA	90	7184	10	5.56	71840	6.47
36	RHODOMONAS MINUTA	340	7184	29	8.66	208336	70.83
37	CRYPTOMONAS EROSA	2700	200	14	17.28	2800	7.56
38	CRYPTOMONAS ROSTRATIFORM	5400	200	7	21.77	1400	7.56
39	KATABLEPHARIS OVALIS	150	7184	7	6.59	50288	7.54
	********** GROUP 7 **********						
40	GYMNODINIUM SP.	11725	200	17	28.19	3400	39.87
41	PERIDINIUM ACICULIFERRIM	9350	200	20	26.14	4000	37.40

CONT'D: RAT LAKE STN2. MAY87

********** SUMMARY **********

GROUP NUMBER	CELLS/L	% OF TOTAL	BIOMASS mg/m^3	% OF TOTAL
1	201968.00	18.42	85.72	1.32
2	195568.00	17.84	102.29	1.57
3	200.00	0.02	0.97	0.01
4	230298.00	21.01	23.79	0.37
5	126192.00	11.51	6110.77	94.00
6	334664.00	30.53	99.96	1.54
7	7400.00	0.68	77.27	1.19
TOTAL	1096280.00		6500.77	

****

AVERAGE EQUIVELANT SPHEREICAL VOLUME= 16.74

DIVERSITY INDICES:

MARGALEF'S INDEX = 2.73

SHANNON-WEAVER INDEX = 3.86

```
**************************
* RAT    STC  54          *
*                         *
*  14 MAY 87 (DAY 134)    *
**************************
```

```
                                                  # SPECIES=32
                                                  STRATA DEPTH=
                                                  STRATA VOL.=
                                                  FILE NAME = STC14MAY87
```

REC #	SPECIES	CELL VOLUME	CORR. FACT.	RAW COUNT	EST	CELLS /LITER	BIOMASS mg/m^3
	**********						
	GROUP 1						
	**********						
3	APHANIZOMENON FLOS-AQUAE	3700	200	38	19.19	7600	28.12
4	ANABAENA PLANCTONICA	10900	200	7	27.51	1400	15.26
5	LYNGBYA SP.	270	7184	2	8.02	14368	3.88
	**********						
	GROUP 2						
	**********						
6	CHLAMYDOMONAS SPP.	100	7184	4	5.76	28736	2.87
7	CHLAMYDOMONAS SPP.	525	7184	2	10.01	14368	7.54
8	CHLORGONIUM MAXIMUM	10100	200	7	26.22	1400	14.14
9	MONORAPHIDIUM SETIFORME	100	7184	7	5.76	50288	5.03
10	MONORAPHIDIUM CONTORTUM	40	7184	7	4.24	50288	2.01
11	CLOSTERIUM SP.	300	200	1	8.31	200	0.06
12	ANKYRA JUDAI	50	7184	5	4.57	35920	1.80
13	BOTRYOCOCCUS BRAUNII	12500	200	1	28.79	200	2.50
	**********						
	3ROUP 3						
	**********						
14	TRACHELOMONAS VOLVOCINA	4900	200	2	21.07	400	1.96
	**********						
	3ROUP 4						
	**********						
15	SMALL CHRYSOPHYCEAE	50	7184	26	4.57	186784	9.34
16	CHRYSOCHROMULINA PARVA	50	7184	10	4.57	71840	3.59
17	SYNURA SPAGNICOLA	24400	200	1	35.99	200	4.88
	**********						
	GROUP 5						
	**********						
18	MELOSIRA GRANULATA	65500	7184	4	50.01	28736	1882.21
19	MELOSIRA ITALICA	31800	7184	24	39.31	172416	5482.93
20	MELOSIRA SP.	31100	7184	2	39.02	14368	446.84
21	SYNEDRA ACUS	130	200	13	6.29	2600	0.34
22	SYNEDRA ACUS	400	200	21	9.14	4200	1.68
23	SYNEDRA ULNA	2900	200	1	17.69	200	0.58
24	ASTERIONELLA FORMOSA	120	200	50	6.12	10000	1.20
25	ASTERIONELLA FORMOSA	330	200		7.40	11000	2.53
26	STEPHANODISCUS ASTREAE	3700	200	4	19.19	800	2.96
	**********						
	GROUP 6						
	**********						
27	RHODOMONAS MINUTA	90	7184	18	5.56	129312	11.64
28	RHODOMONAS MINUTA	340	7184	84	8.66	603456	205.18
29	CRYPTOMONAS EROSA	2700	200	41	17.28	8200	22.14
30	CRYPTOMONAS ROSTRATIFORM	5500	200	11	21.90	2200	12.10
31	KATABLEPHARIS OVALIS	100	7184	9	5.76	64656	6.47
	**********						
	GROUP 7						
	**********						
32	GYMNODINIUM HELVETICUM	28000	200	1	37.67	200	5.60
33	GYMNODINIUM SP.	11000	200	15	27.39	3000	33.00
34	PERIDINIUM ACICULIFERRIM	9000	200	21	25.81	4200	37.80

********** SUMMARY **********

GROUP NUMBER	CELLS/L	% OF TOTAL	BIOMASS mg/m^3	% OF TOTAL
1	23368.00	1.53	47.26	0.57
2	181400.00	11.91	35.95	0.44
3	400.00	0.03	1.96	0.02
4	258824.00	16.99	17.81	0.22
5	244320.00	16.04	7821.17	94.71
6	807824.00	53.02	257.52	3.12
7	7400.00	0.49	76.40	0.93
TOTAL	1523536.00		8258.07	

AVERAGE EQUIVELANT SPHEREICAL VOLUME= 17.49

DIVERSITY INDICES:

MARGALEF'S INDEX = 2.18

SHANNON-WEAVER INDEX = 3.13

****
* RAT ST1 *
*
* 08 JUN 87 (DAY 159) *
****

SPECIES=35
STRATA DEPTH=
STRATA VOL.=
FILE NAME = ST103JUN87

REC #	SPECIES	CELL VOLUME	CORR. FACT.	RAW COUNT	ESD	CELLS /LITER	BIOMASS mg/m^3
	**********						
	GROUP 1						
	**********						
3	APHANIZOMENON FLOS-AQUAE	2650	200	65	17.17	13000	34.45
4	LYNGBYA SP.	335	7184	1	8.62	7184	2.41
	**********						
	GROUP 2						
	**********						
5	CHLAMYDOMONAS SPP.	100	7184	1	5.76	7184	0.72
6	CHLOROGONIUM MAXIMUM	21400	200	1	34.45	200	4.28
7	CHODATELLA SP.	110	7184	1	5.94	7184	0.79
8	SCENEDESMUS BREVISPINA	90	7184	4	5.56	28736	2.59
9	DICTYOSPHAERIUM SIMPLEX	100	7184	3	5.76	21552	2.16
10	MONORAPHIDIUM CONTORTUM	25	7184	12	3.63	86208	2.16
11	ANKISTRODESMUS BRAUNII	140	7184	4	6.44	28736	4.02
12	BOTRYOCOCCUS BRAUNII	24400	200	3	35.99	600	14.64
	**********						
	GROUP 3						
	**********						
13	EUGLENA ACUS	8300	200	2	25.12	400	3.32
	**********						
	GROUP 4						
	**********						
14	SMALL CHRYSOPHYCEAE	50	7184	25	4.57	179600	8.98
15	LARGE CHRYSOPHYCEAE	38	7184	9	8.99	64656	24.57
16	CHRYSOCHROMULINA PARVA	50	7184	35	4.57	251440	12.57
17	SYNURA SPAGNICOLA	22400	200	1	34.97	200	4.48
18	DINOBRYON BAVARICUM	300	7184	10	8.31	71840	21.55
19	CHRYSOCHROMULINA BRIV.LAU.	380	7184	8	8.99	57472	21.84
20	SALPINGOECA SP.	380	7184	10	8.99	71840	27.30
	**********						
	GROUP 5						
	**********						
21	MELOSIRA GRANULATA	14480	7184	1	30.24	7184	104.02
22	MELOSIRA ITALICA	31800	7184	2	39.31	14368	456.90
23	MELOSIRA SP.	3650	7184	2	19.10	14368	52.44
24	TABELLARIA FENESTRATA	1050	200	22	12.61	4400	4.62
25	SYNEDRA ACUS	145	200	9	6.51	1800	0.26
26	SYNEDRA ACUS	350	200	41	8.74	8200	2.87
27	SYNEDRA ULNA	2900	200	6	17.69	1200	3.48
28	ASTERIONELLA FORMOSA	130	200	163	6.29	32600	4.24
29	ASTERIONELLA FORMOSA	225	200	290	7.55	58000	13.05
30	STEPHANODISCUS ASTREAE	3700	200	2	19.19	400	1.48
	**********						
	GROUP 6						
	**********						
31	RHODOMONAS MINUTA	90	7184	15	5.56	107760	9.70
32	RHODOMONAS MINUTA	350	7184	26	8.74	186784	65.37
33	CRYPTOMONAS EROSA	2700	200	8	17.28	1600	4.32
34	CRYPTOMONAS ROSTRATIFORM	9200	200	1	26.00	200	1.84
35	KATABLEPHARIS OVALIS	100	7184	2	5.76	14368	1.44
	**********						
	GROUP 7						
	**********						
36	GYMNODINIUM SP.	16280	200	3	31.45	600	9.77
37	PERIDINIUM INCONSPICUM	3000	200	4	17.89	800	2.40

CONT'D: RAT LAKE STN1 08 JUNE 87

********** SUMMARY **********

GROUP NUMBER	CELLS/L	% OF TOTAL	BIOMASS mg.m 3	% OF TOTAL
1	20184.00	1.49	36.86	3.96
2	180400.00	13.34	31.35	3.37
3	400.00	0.03	3.32	0.36
4	697048.00	51.53	121.29	13.03
5	142520.00	10.54	643.37	69.10
6	310712.00	22.97	82.67	8.88
7	1400.00	0.10	12.17	1.31
TOTAL	1352664.00		931.02	

****

AVERAGE EQUIVELANT SPHEREICAL VOLUME= 14.68

DIVERSITY INDICES:

MARGALEF'S INDEX = 2.41

SHANNON-WEAVER INDEX = 3.85

* MMTB SPC *
* *
* 08 JUN 87 (DAY 159) *

* SPECIES=34
STRATA DEPTH=
STRATA VOL.=
FILE NAME = ST208JUN87

REC #	SPECIES	CELL VOLUME	CORR. FACT.	RAW COUNT	RAW ESD	CELLS /LITER	BIOMASS mg/m^3
	********** GROUP 1 **********						
3	APHANIZOMENON FLOS-AQUAE	3660	200	44	19.12	8800	32.21
4	ANABAENA CIRCINALIS	7060	200	1	23.80	200	1.41
5	LYNGBYA SP.	265	7184	6	7.97	43104	11.42
	********** GROUP 2 **********						
6	CHLAMYDOMONAS SPP.	195	7184	9	7.19	64656	12.61
7	PEDIASTRUM DUPLEX	69000	200	1	50.89	200	13.80
8	MONORAPHIDIUM SETIFORME	90	7184	3	5.56	21552	1.94
9	MONORAPHIDIUM CONTORTUM	40	7184	5	4.24	35920	1.44
10	ELAKATOTHRIX GELATINOSA	60	7184	2	4.86	14368	0.86
11	CLOSTERIUM SP.	1750	200	1	14.95	200	0.35
12	BOTRYOCOCCUS BRAUNII	41600	200	3	42.99	600	24.96
	********** GROUP 4 **********						
13	SMALL CHRYSOPHYCEAE	50	7184	24	4.57	172416	8.62
14	LARGE CHRYSOPHYCEAE	380	7184	2	8.99	14368	5.46
15	CHRYSOCHROMULINA PARVA	50	7184	29	4.57	208336	10.42
16	CHRYSOCHROMULINA BRIV.LAU.	380	7184	4	8.99	28736	10.92
17	SALPINGOECA SP.	380	7184	2	8.99	14368	5.46
18	STELEXMONAS DICHOTOMS	110	7184	3	5.94	21552	2.37
	********** GROUP 5 **********						
19	MELOSIRA ITALICA	20650	7184	4	34.04	28736	593.60
20	MELOSIRA SP.	1440	7184	3	14.01	21552	31.03
21	MELOSIRA SP.	65000	7184	2	49.87	14368	933.92
22	CYCLOTELLA SPP.	170	7184	5	6.87	35920	6.11
23	TABELLARIA FENESTRATA	2100	200	16	15.89	3200	6.72
24	SYNEDRA ACUS	130	200	5	6.29	1000	0.13
25	SYNEDRA ACUS	400	200	36	9.14	7200	2.88
26	SYNEDRA ULNA	2850	200	5	17.59	1000	2.85
27	ASTERIONELLA FORMOSA	140	200	286	6.44	57200	8.01
28	ASTERIONELLA FORMOSA	230	200	264	7.60	52800	12.14
29	STEPHANODISCUS ASTREAE	3700	200	5	19.19	1000	3.70
	********** GROUP 6 **********						
30	RHODOMONAS MINUTA	90	7184	11	5.56	79024	7.11
31	RHODOMONAS MINUTA	350	7184	25	8.74	179600	62.86
32	CRYPTOMONAS EROSA	2700	200	15	17.28	3000	8.10
33	KATABLEPHARIS OVALIS	90	7184	2	5.56	14368	1.29
	********** GROUP 7 **********						
34	GYMNODINIUM SP.	17200	200	4	32.03	800	13.76
35	PERIDINIUM INCONSPICUM	3000	200	2	17.89	400	1.20
36	PERIDINIUM ACICULIFERRIM	23450	200	4	35.51	800	18.76

************* SUMMARY **************

GROUP NUMBER	CELLS/L	% OF TOTAL	BIOMASS mg/m^3	% OF TOTAL
1	52104.00	4.53	45.04	2.42
2	137496.00	11.94	55.96	3.01
3	0.00	0.00	0.00	0.00
4	459776.00	39.93	43.25	2.33
5	223976.00	19.45	1600.89	86.15
6	275992.00	23.97	79.37	4.27
7	2000.00	0.17	33.72	1.81
TOTAL	1151344.00		1858.22	

****

AVERAGE EQUIVELANT SPHEREICAL VOLUME= 15.68

DIVERSITY INDICES:
MARGALEF'S INDEX = 2.36
SHANNON-WEAVER INDEX = 3.67

```
**********************************
* RAT    STD      58             *
*                                *
* 08 JUN 87 (DAY 159)            *
**********************************
```

SPECIES=32
STRATA DEPTH=
STRATA VOL.=
FILE NAME = STD:SJUN87

REC #	SPECIES	CELL VOLUME	CORR. FACT.	RAW COUNT	ESD	CELLS /LITER	BIOMASS mg/m^3
	**********						
	GROUP 1						
	**********						
3	APHANIZOMENON FLOS-AQUAE	2890	200	59	17.67	11800	34.10
4	ANABAENA PLANCTONICA	13200	200	1	29.32	200	2.64
	**********						
	GROUP 2						
	**********						
5	CHLAMYDOMONAS SPP.	60	7184	2	4.66	14368	0.86
6	SCENEDESMUS SP.	150	7184	4	6.55	28736	4.31
7	MONORAPHIDIUM SETIFORME	350	7184	2	8.74	14368	5.03
8	MONORAPHIDIUM CONTORTUM	40	7184	11	4.24	79024	3.16
	**********						
	GROUP 3						
	**********						
9	EUGLENA ACUS	8900	200	1	25.71	200	1.78
	**********						
	GROUP 4						
	**********						
10	SMALL CHRYSOPHYCEAE	50	7184	30	4.57	215520	10.78
11	CHRYSOCHROMULINA PARVA	50	7184	23	4.57	165232	8.26
12	SPINIFIROMONAS TRIORALIS	380	7184	1	8.99	7184	2.73
13	CHRYSOCHROMULINA BRIV.LAU.	380	7184	2	8.99	14368	5.46
14	SALPINGOECA SP.	380	7184	1	8.99	7184	2.73
15	STELEXMONAS DICHOTOMS	110	7184	3	5.94	21552	2.37
	**********						
	GROUP 5						
	**********						
16	MELOSIRA ITALICA	3200	7184	2	18.28	14368	45.98
17	MELOSIRA SP.	1200	7184	1	13.18	7184	8.62
18	MELOSIRA SP.	82700	7184	2	54.03	14368	1188.23
19	TABELLARIA FENESTRATA	2150	200	4	16.01	800	1.72
20	FRAGILARIA CROTONENSIS	130	200	10	6.29	2000	0.26
21	SYNEDRA ACUS	140	200	4	6.44	800	0.11
22	SYNEDRA ACUS	400	200	44	9.14	8800	3.52
23	SYNEDRA ULNA	2300	200	11	16.38	2200	5.06
24	ASTERIONELLA FORMOSA	130	200	101	6.29	20200	2.63
25	ASTERIONELLA FORMOSA	230	200	462	7.60	92400	20.77
26	DIATOMA SP	100	200	48	5.76	9600	0.96
	**********						
	GROUP 6						
	**********						
27	RHODOMONAS MINUTA	90	7184	28	5.56	201152	18.10
28	RHODOMONAS MINUTA	350	7184	29	8.74	208336	72.92
29	CRYPTOMONAS EROSA	2700	200	6	17.28	1200	3.24
30	CRYPTOMONAS ROSTRATIFORM	9150	200	1	25.95	200	1.83
31	KATABLEPHARIS OVALIS	110	7184	10	5.94	71840	7.90
	**********						
	GROUP 7						
	**********						
32	GYMNODINIUM HELVETICUM	10260	200	2	26.96	400	4.10
33	PERIDINIUM INCONSPICUM	3000	200	1	17.89	200	0.60
34	PERIDINIUM ACICULIFERRIM	9350	200	4	26.14	800	7.48

********** SUMMARY **********

GROUP NUMBER	CELLS/L	% OF TOTAL	BIOMASS mg/m^3	% OF TOTAL
1	12000.00	0.97	36.74	2.49
2	136496.00	11.06	13.36	0.90
3	200.00	0.02	1.78	0.12
4	431040.00	34.91	32.33	2.19
5	170720.00	13.83	1277.88	86.44
6	482728.00	39.10	103.99	7.03
7	1400.00	0.11	12.18	0.82
TOTAL	1234584.00		1478.27	

AVERAGE EQUIVELANT SPHERICAL VOLUME= 13.53

DIVERSITY INDICES:

MARGALEF'S INDEX = 2.21

SHANNON-WEAVER INDEX = 3.83

```
**********************************
* RAT    ST1    59               *
*                                 *
* 06 JUL 87 (DAY 187)             *
**********************************
```

\# SPECIES=36
STRATA DEPTH=
STRATA VOL.=
FILE NAME = ST106JUL87

REC #	SPECIES	CELL VOLUME	CORR. FACT.	RAW COUNT	ESD	CELLS /LITER	BIOMASS mg/m 3
	GROUP 1						
3	APHANIZOMENON FLOS-AQUAE	2300	200	108	16.38	21600	49.68
4	ANABAENA PLANCTONICA	11800	200	16	28.25	3200	37.76
5	ANABAENA CIRCINALIS	6380	200	38	22.01	7600	48.49
6	LYNGBYA SP.	300	7184	1	8.31	7184	2.16
	GROUP 2						
7	CHLAMYDOMONAS SPP.	100	7184	2	5.76	14368	1.44
8	CHLAMYDOMONAS SPP.	500	7184	1	9.85	7184	3.59
9	MONORAPHIDIUM SETIFORME	90	7184	1	5.56	7184	0.65
10	MONORAPHIDIUM CONTORTUM	45	7184	3	4.41	21552	0.97
11	CLOSTERIUM SP.	1700	200	1	14.81	200	0.34
12	SPONDYLOSIUM PLANUM	125	7184	1	6.20	7184	0.90
13	BOTRYOCOCCUS BRAUNII	24425	200	2	36.00	400	9.77
	GROUP 3						
14	EUGLENA ACUS	8790	200	1	25.61	200	1.76
15	TRACHELOMONAS VOLVOCINA	5300	200	3	21.62	600	3.18
	GROUP 4						
16	SMALL CHRYSOPHYCEAE	50	7184	40	4.57	287360	14.37
17	LARGE CHRYSOPHYCEAE	380	7184	3	8.99	21552	8.19
18	CHRYSOCHROMULINA PARVA	50	7184	60	4.57	431040	21.55
19	DINOBRYON BAVARICUM	100	7184	6	5.76	43104	4.31
20	DINOBRYON SERTULARIA	110	7184	5	5.94	35920	3.95
21	SALPINGOECA SP.	380	7184	5	8.99	35920	13.65
	GROUP 5						
22	MELOSIRA ITALICA	33300	7184	1	39.92	7184	239.23
23	MELOSIRA SP.	1880	7184	7	15.31	50288	94.54
24	RHIZOSOLENIA ERIENSE	1200	7184	6	13.18	43104	51.72
25	TABELLARIA FENESTRATA	2300	200	23	15.97	4600	9.66
26	SYNEDRA ACUS	130	200	1	6.29	200	0.03
27	SYNEDRA ACUS	350	200	40	8.74	8000	2.80
28	SYNEDRA ULNA	2850	200	5	17.59	1000	2.85
29	ASTERIONELLA FORMOSA	130	200	256	6.29	51200	6.66
30	ASTERIONELLA FORMOSA	220	200	295	7.49	59000	12.98
31	STEPHANODISCUS ASTREAE	3700	200	3	19.19	600	2.22
32	DIATOMA SP	100	200	10	5.76	2000	0.20
	GROUP 6						
33	RHODOMONAS MINUTA	90	7184	15	5.56	107760	9.70
34	RHODOMONAS MINUTA	340	7184	25	8.66	179600	61.06
35	CRYPTOMONAS EROSA	3600	200	5	19.02	1000	3.60
36	KATABLEPHARIS OVALIS	100	7184	4	5.76	28736	2.87
	GROUP 7						
37	GYMNODINIUM SP.	16700	200	3	31.71	600	10.02
38	PERIDINIUM INCONSPICUM	3050	200	4	17.99	800	2.44

CONT'D: RAT LAKE STN 1 06 JULY 87

********** SUMMARY **********

GROUP NUMBER	CELLS/L	% OF TOTAL	BIOMASS mg/m^3	% OF TOTAL
1	39584.00	2.64	138.08	18.68
2	58072.00	3.87	17.65	2.39
3	800.00	0.05	4.94	0.67
4	854896.00	57.03	66.02	8.93
5	227176.00	15.15	422.89	57.20
6	317096.00	21.15	77.24	10.45
7	1400.00	0.09	12.46	1.69
TOTAL	1499024.00		739.28	

****

AVERAGE EQUIVELANT SPHEREICAL VOLUME= 12.38

DIVERSITY INDICES:

MARGALEF'S INDEX = 2.46

SHANNON-WEAVER INDEX = 3.48

```
**********************************
*  RAT    ST2      61          *
*                               *
*  06 JUL 87 (DAY 187)          *
**********************************
```

SPECIES=37
STRATA DEPTH=
STRATA VOL.=
FILE NAME = ST2D6JUL87

REC #	SPECIES	CELL VOLUME	CORR. FACT.	RAW COUNT	ESD	CELLS /LITER	BIOMASS mg/m^3
	**********						
	GROUP 1						
	**********						
3	APHANIZOMENON FLOS-AQUAE	2200	200	111	16.14	22200	48.84
4	ANABAENA PLANCTONICA	12600	200	15	28.87	3000	37.80
5	ANABAENA CIRCINALIS	6180	200	11	22.77	2200	13.60
6	LYNGBYA SP.	300	7184	6	8.31	43104	12.93
	**********						
	GROUP 2						
	**********						
7	CHLAMYDOMONAS SPP.	520	7184	1	9.98	7184	3.74
8	PEDIASTRUM DUPLEX	41600	200	14	42.99	2800	116.48
9	SCENEDESMUS QUADRICAUDA	140	7184	2	6.44	14368	2.01
10	DICTYOSPHAERIUM SIMPLEX	15	7184	8	3.06	57472	0.86
11	MONORAPHIDIUM SETIFORME	100	7184	3	5.76	21552	2.16
12	MONORAPHIDIUM CONTORTUM	40	7184	5	4.24	35920	1.44
13	CLOSTERIUM SP.	1490	200	3	14.17	600	0.89
14	BOTRYOCOCCUS BRAUNII	24400	200	1	35.99	200	4.88
	**********						
	GROUP 3						
	**********						
15	EUGLENA ACUS	8600	200	1	25.42	200	1.72
16	TRACHELOMONAS HISPIDA	5300	200	3	21.63	600	3.18
	**********						
	GROUP 4						
	**********						
17	SMALL CHRYSOPHYCEAE	50	7184	24	4.57	244256	12.21
18	CHRYSOCHROMULINA PARVA	50	7184	13	4.57	93392	4.67
19	SYNURA SPAGNICOLA	300	7184	1	8.31	7184	2.16
20	DINOBRYON BAVARICUM	110	7184	9	5.94	64656	7.11
21	CHRYSOCHROMULINA BRIV.LAU.	380	7184	3	8.99	21552	8.19
22	SALPINGOECA SP.	380	7184	9	8.99	64656	24.57
	**********						
	GROUP 5						
	**********						
23	MELOSIRA ITALICA	22900	7184	1	35.23	7184	164.51
24	MELOSIRA SP.	1380	7184	2	13.81	14368	19.83
25	RHIZOSOLENIA ERIENSE	4000	7184	2	42.44	14368	14.77
26	TABELLARIA FENESTRATA	2100	200	13	15.89	2600	5.46
27	FRAGILARIA CROTONENSIS	130	200	10	6.29	2000	0.26
28	SYNEDRA ACUS	145	7184	7	6.52	50288	7.29
29	SYNEDRA ACUS	400	200	33	9.14	6600	2.64
30	SYNEDRA ULNA	2800	200	7	17.49	1400	3.92
31	ASTERIONELLA FORMOSA	130	200	147	6.29	29400	3.82
32	ASTERIONELLA FORMOSA	220	200	249	7.49	49800	10.96
33	DIATOMA SP	110	200	44	5.94	8800	0.97
34	GYRDIGMA SP	7800	200	1	24.61	200	1.56
	**********						
	GROUP 6						
	**********						
35	RHODOMONAS MINUTA	90	7184	16	5.56	114944	10.34
36	RHODOMONAS MINUTA	340	7184	16	8.66	114944	39.08
37	CRYPTOMONAS EROSA	4000	200	2	19.69	400	1.60
38	KATABLEPHARIS OVALIS	150	7184	1	6.59	7184	1.08
	**********						
	GROUP 7						
	**********						
39	PERIDINIUM INCONSPICUM	3300	200	1	18.47	200	0.66

CONT'D : RAT LAKE STN 2 06 JULY 87

********** SUMMARY **********

GROUP NUMBER	CELLS/L	% OF TOTAL	BIOMASS mg/m^3	% OF TOTAL
1	70504.00	6.23	113.17	18.93
2	140096.00	12.38	132.46	22.16
3	800.00	0.07	4.90	0.82
4	495696.00	43.80	58.91	9.85
5	187008.00	16.52	235.59	39.41
6	237472.00	20.98	52.10	8.72
7	200.00	0.02	0.66	0.11
TOTAL	1131776.00		597.78	

****

AVERAGE EQUIVELANT SPHEREICAL VOLUME= 13.71

DIVERSITY INDICES:

MARGALEF'S INDEX = 2.59

SHANNON-WEAVER INDEX = 3.99

* RAT ST3 *
* *
* 06 JUL 87 (DAY 187) *

SPECIES=34
STRATA DEPTH=
STRATA VOL.=
FILE NAME = ST306JUL87

REC #	SPECIES	CELL VOLUME	CORR. FACT.	RAW COUNT	ESD	CELLS /LITER	BIOMASS mg/m^3
	GROUP 1						
3	APHANIZOMENON FLOS-AQUAE	3530	200	100	18.89	20000	70.60
4	APHANIZOMENON FLOS-AQUAE	99000	200	4	57.40	800	79.20
5	ANABAENA PLANCTONICA	13200	200	3	29.32	600	7.92
6	ANABAENA CIRCINALIS	5800	200	11	22.29	2200	12.76
	GROUP 2						
7	CHLAMYDOMONAS SPP.	80	7184	1	5.35	7184	0.57
8	CHLAMYDOMONAS SPP.	170	7184	1	6.87	7184	1.22
9	CHLAMYDOMONAS SPP.	520	7184	2	9.95	14368	7.47
10	PEDIASTRUM DUPLEX	69400	200	1	50.99	200	13.88
11	FAULSCHULZIA PSEUDEVOLVOX	80	7184	16	5.35	114944	9.20
12	MONORAPHIDIUM SETIFORME	90	7184	1	5.56	7184	0.65
13	MONORAPHIDIUM CONTORTUM	35	7184	16	4.06	114944	4.02
14	BOTRYOCOCCUS BRAUNII	24400	200	2	35.99	400	9.76
	GROUP 4						
15	SMALL CHRYSOPHYCEAE	90	7184	30	5.56	215520	19.40
16	CHRYSOCHROMULINA PARVA	50	7184	9	4.57	64656	3.23
17	DINOBRYON CRENULATUM	170	7184	1	6.87	7184	1.22
18	DINOBRYON SERTULARIA	240	7184	10	7.71	71840	17.24
19	STELEXMONAS DICHOTOMS	100	7184	1	5.76	7184	0.72
	GROUP 5						
20	MELOSIRA ITALICA	380	7184	1	8.99	7184	2.73
21	MELOSIRA SP.	2260	7184	5	16.28	35920	81.19
22	CYCLOTELLA COMTA	1300	200	7	13.54	1400	1.83
23	FRAGILARIA CROTONENSIS	120	200	40	6.12	8000	0.96
24	SYNEDRA ACUS	140	200	4	6.44	800	0.11
25	SYNEDRA ACUS	400	200	27	9.14	5400	2.16
26	SYNEDRA ULNA	2300	200	2	16.38	400	0.92
27	ASTERIONELLA FORMOSA	140	200	128	6.44	25600	3.58
28	ASTERIONELLA FORMOSA	220	200	180	7.49	36000	8.05
29	DIATOMA SP	100	200	28	5.76	5600	0.56
	GROUP 6						
30	RHODOMONAS MINUTA	80	7184	42	5.35	301728	24.14
31	RHODOMONAS MINUTA	340	7184	38	8.66	272992	92.82
32	CRYPTOMONAS EROSA	2700	200	10	17.23	2000	5.40
33	CRYPTOMONAS ROSTRATIFORM	5500	200	1	21.90	200	1.10
34	KATABLEPHARIS OVALIS	150	7184	6	6.59	43104	6.47
	GROUP 7						
35	GYMNODINIUM SP.	560	7184	2	10.23	14368	8.05
36	GYMNODINIUM SP.	18500	200	1	32.81	200	3.70

************** SUMMARY **************

GROUP NUMBER	CELLS/L	% OF TOTAL	BIOMASS mg/m^3	% OF TOTAL
1	23600.00	1.66	170.48	33.91
2	266408.00	18.79	46.77	9.30
3	0.00	0.00	0.00	0.00
4	366384.00	25.84	41.81	8.32
5	126904.00	8.95	102.08	20.30
6	620024.00	43.73	129.92	25.84
7	14568.00	1.03	11.75	2.34
TOTAL	1417888.00		502.81	

AVERAGE EQUIVELANT SPHEREICAL VOLUME= 14.17

DIVERSITY INDICES:
MARGALEF'S INDEX = 2.33

```
**********************************
*  RAT     ST1                   *
*                                *
*  03 AUG 87 (DAY 215)           *
**********************************
```

\# SPECIES=29
STRATA DEPTH=
STRATA VOL.=
FILE NAME = ST103AUG87

REC #	SPECIES	CELL VOLUME	CORR. FACT.	RAW COUNT	ESD	CELLS /LITER	BIOMASS mg.m^3
	GROUP 1						
3	APHANIZOMENON FLOS-AQUAE	3500	200	121	18.84	24200	84.70
4	APHANIZOMENON FLOS-AQUAE	32400	200	6	39.55	1200	38.88
5	ANABAENA PLANCTONICA	11100	200	2	27.68	400	4.44
6	ANABAENA CIRCINALIS	6200	200	31	22.79	6200	38.44
7	LYNGBYA SP.	260	7184	2	7.92	14368	3.74
	GROUP 2						
8	CHLAMYDOMONAS SPP.	110	7184	1	5.94	7184	0.79
9	CHLAMYDOMONAS SPP.	380	7184	3	8.99	21552	8.19
10	MONORAPHIDIUM SETIFORME	90	7184	3	5.56	21552	1.94
11	MONORAPHIDIUM CONTORTUM	350	7184	2	8.74	14368	5.03
12	BOTRYOCOCCUS BRAUNII	24400	200	3	35.99	600	14.64
	GROUP 3						
13	TRACHELOMONAS VOLVOCINA	5200	200	2	21.49	400	2.08
	GROUP 4						
14	SMALL CHRYSOPHYCEAE	50	7184	21	4.57	150864	7.54
15	LARGE CHRYSOPHYCEAE	380	7184	4	8.99	28736	10.93
16	CHRYSOCHROMULINA PARVA	380	7184	30	8.99	215520	81.90
17	CHRYSOCHROMULINA BRIV.LAU.	380	7184	6	8.99	43104	16.38
18	SALPINGOECA SP.	260	7184	13	7.92	93392	24.28
	GROUP 5						
19	MELOSIRA SP.	110	7184	4	5.94	28736	3.16
20	FRAGILARIA CROTONENSIS	100	200	10	5.76	2000	0.20
21	SYNEDRA ACUS	140	200	1	6.44	200	0.03
22	SYNEDRA ACUS	400	200	13	9.14	2600	1.04
23	SYNEDRA ULNA	2100	200	3	15.89	600	1.26
24	ASTERIONELLA FORMOSA	130	200	28	6.29	5600	0.73
25	~~ASTERIONELLA FORMOSA~~	220	200	10	7.47	2000	0.44
	GROUP 6						
26	RHODOMONAS MINUTA	80	7184	47	5.35	337648	27.01
27	RHODOMONAS MINUTA	340	7184	30	8.66	215520	73.28
28	CRYPTOMONAS EROSA	2710	200	40	17.30	8000	21.68
29	KATABLEPHARIS OVALIS	100	7184	13	5.76	93392	9.34
	GROUP 7						
30	GYMNODINIUM SP.	650	7184	3	10.75	21552	14.01
31	PERIDINIUM INCONSPICUM	3000	200	2	17.89	400	1.20

********** SUMMARY **********

GROUP NUMBER	CELLS/L	% OF TOTAL	BIOMASS mg/m^3	% OF TOTAL
1	46368.00	3.40	170.20	34.23
2	65256.00	4.79	30.59	6.15
3	400.00	0.03	2.08	0.42
4	531616.00	39.04	141.02	28.36
5	41736.00	3.06	6.86	1.38
6	654560.00	48.06	131.31	26.41
7	21952.00	1.61	15.21	3.06
TOTAL	1361888.00		497.26	

AVERAGE EQUIVELANT SPHEREICAL VOLUME= 12.61

DIVERSITY INDICES:
MARGALEF'S INDEX = 1.98
SHANNON-WEAVER INDEX = 3.37

```
**************************
*  RAT    ST2      65     *
*                         *
*  03 AUG 87 (DAY 215)    *
**************************
```

SPECIES=38
STRATA DEPTH=
STRATA VOL.=
FILE NAME = ST203AUG87

REC #	SPECIES	CELL VOLUME	CORR. FACT.	RAW COUNT	ESD	CELLS LITER	BIOMASS mg/m^3
	********** GROUP 1 **********						
3	APHANIZOMENON FLOS-AQUAE	3500	200	72	18.84	14400	50.40
4	APHANIZOMENON FLOS-AQUAE	32400	200	3	39.55	600	19.44
5	ANABAENA PLANCTONICA	12200	200	1	28.56	200	2.44
6	ANABAENA CIRCINALIS	82900	200	44	54.10	8800	729.52
7	ANABAENA SP.	82400	200	1	53.99	200	16.48
	********** GROUP 2 **********						
8	CHLAMYDOMONAS SPP.	50	7184	1	4.57	7184	0.36
9	CHLAMYDOMONAS SPP.	380	7184	1	8.99	7184	2.73
10	PEDIASTRUM DUPLEX	41600	200	1	42.99	200	8.32
11	SCENEDESMUS BREVISPINA	100	7184	4	5.76	28736	2.87
12	DICTYOSPHAERIUM SIMPLEX	15	7184	16	3.06	114944	1.73
13	MONORAPHIDIUM SETIFORME	100	7184	1	5.76	7184	0.72
14	MONORAPHIDIUM CONTORTUM	35	7184	2	4.06	14368	0.50
15	CLOSTERIUM SP.	1390	200	2	13.85	400	0.56
16	BOTRYOCOCCUS BRAUNII	24400	200	2	35.99	400	9.76
	********** GROUP 3 **********						
17	TRACHELOMONAS VOLVOCINA	5200	200	10	21.49	2000	10.40
	********** GROUP 4 **********						
18	SMALL CHRYSOPHYCEAE	50	7184	51	4.57	366384	18.32
19	LARGE CHRYSOPHYCEAE	380	7184	9	8.99	64656	24.57
20	CHRYSOCHROMULINA PARVA	50	7184	15	4.57	107760	5.39
21	MALLOMONAS CAUDATA	5800	200	4	22.29	800	4.64
22	MALLOMONAS PSEUDOCORONATA	3350	200	2	18.56	400	1.34
23	DINOBRYON BAVARICUM	230	7184	1	7.60	7184	1.65
24	BICOECA AINIKIAE	380	7184	1	8.99	7184	2.73
25	SALPINGOECA SP.	380	7184	1	8.99	7184	2.73
26	STELEXMONAS DICHOTOMS	80	7184	1	5.35	7184	0.57
	********** GROUP 5 **********						
27	MELOSIRA SP.	150	7184	9	6.59	64656	9.70
28	RHIZOSOLENIA ERIENSE	1000	7184	1	12.41	7184	7.18
29	SYNEDRA ACUS	140	200	2	6.44	400	0.06
30	SYNEDRA ACUS	220	200	22	7.49	4400	0.97
31	SYNEDRA ULNA	2300	200	2	16.38	400	0.92
32	ASTERIONELLA FORMOSA	130	7184	42	6.29	301728	39.22
33	ASTERIONELLA FORMOSA	220	7184	50	7.49	359200	79.02
34	STEPHANODISCUS ASTREAE	3600	200	5	19.02	1000	3.60
35	DIATOMA SP	120	200	10	6.12	2000	0.24
	********** GROUP 6 **********						
36	RHODOMONAS MINUTA	80	7184	34	5.35	244256	19.54
37	RHODOMONAS MINUTA	340	7184	45	8.66	323280	109.92
38	CRYPTOMONAS EROSA	2800	200	33	17.49	6600	18.48
39	KATABLEPHARIS OVALIS	100	7184	23	5.76	165232	16.52
	********** GROUP 7 **********						
40	PERIDINIUM INCONSPICUM	3000	200	1	17.89	200	0.60

CONT'D: RAT LAKE STN 2 03 AUG 87

********** SUMMARY **********

GROUP NUMBER	CELLS/L	% OF TOTAL	BIOMASS mg/m^3	% OF TOTAL
1	24200.00	1.07	818.28	66.85
2	180600.00	8.01	27.54	2.25
3	2000.00	0.09	10.40	0.85
4	568736.00	25.21	61.94	5.06
5	740968.00	32.84	140.92	11.51
6	739368.00	32.77	164.46	13.43
7	200.00	0.01	0.60	0.05
TOTAL	2256072.00		1224.14	

****

AVERAGE EQUIVELANT SPHERICAL VOLUME= 15.13

DIVERSITY INDICES:
MARGALEF'S INDEX =, 2.53
SHANNON-WEAVER INDEX = 3.49

RAT ST3

05 AUG 87 (DAY 215)

SPECIES=31
STRATA DEPTH=
STRATA VOL.=
FILE NAME = ST305AUG87

REC #	SPECIES	CELL VOLUME	CORR. FACT.	RAW COUNT	ESD	CELLS /LITER	BIOMASS mg/m^3
	GROUP 1						
3	APHANIZOMENON FLOS-AQUAE	3500	200	39	18.84	7800	27.30
4	ANABAENA CIRCINALIS	5890	200	32	22.41	6400	37.70
5	ANABAENA SP.	59500	200	2	48.44	400	23.80
	GROUP 2						
6	CHLAMYDOMONAS SPP.	100	7184	1	5.76	7184	0.72
7	PAULSCHULZIA PSEUDEVOLVOX	195	7184	25	7.19	179600	35.02
8	SCENEDESMUS BREVISPINA	90	7184	4	5.56	28736	2.59
9	MONORAPHIDIUM SETIFORME	35	7184	3	4.06	21553	0.75
10	MONORAPHIDIUM CONTORTUM	110	7184	6	5.94	43104	4.74
11	CLOSTERIUM SP.	1200	200	1	13.18	200	0.24
	GROUP 3						
12	TRACHELOMONAS VOLVOCINA	5200	200	8	21.49	1600	8.32
	GROUP 4						
13	SMALL CHRYSOPHYCEAE	50	7184	28	4.57	201152	10.06
14	LARGE CHRYSOPHYCEAE	380	7184	2	8.99	14368	5.46
15	CHRYSOCHROMULINA PARVA	50	7184	39	4.57	280176	14.01
16	DINOBRYON BAVARICUM	300	7184	3	8.01	21552	6.47
17	CHRYSOCHROMULINA BRIV.LAU.	520	7184	3	9.98	21552	11.21
18	SALPINGOECA SP.	280	7184	3	8.99	21552	6.19
19	STELEXMONAS DICHOTOMS	100	7184	8	5.76	57472	5.75
	GROUP 5						
20	TABELLARIA FENESTRATA	2100	200	1	15.89	200	0.42
21	SYNEDRA ACUS	350	200	15	8.74	3000	1.05
22	SYNEDRA ULNA	2325	200	1	16.44	200	0.47
23	ASTERIONELLA FORMOSA	137	200	61	6.40	12200	1.67
24	ASTERIONELLA FORMOSA	220	200	9	7.49	1800	0.40
25	STEPHANODISCUS ASTREAE	2400	200	3	16.61	600	1.44
	GROUP 6						
26	RHODOMONAS MINUTA	90	7184	53	5.56	380752	34.27
27	RHODOMONAS MINUTA	350	7184	42	8.74	301728	105.60
28	CRYPTOMONAS EROSA	2700	200	208	17.28	41600	112.32
29	CRYPTOMONAS MARSSONII	1900	200	36	15.37	7200	13.68
30	CRYPTOMONAS ROSTRATIFORM	3300	200	3	18.47	600	1.98
31	KATABLEPHARIS OVALIS	100	7184	6	5.76	43104	4.31
	GROUP 7						
32	GYMNODINIUM SP.	12400	200	1	28.72	200	2.48
33	PERIDINIUM INCONSPICUM	3000	200	1	17.89	200	0.60

SUMMARY

GROUP NUMBER	CELLS/L	% OF TOTAL	BIOMASS mg/m^3	% OF TOTAL
1	14600.00	0.85	88.80	18.38
2	280376.00	16.42	44.06	9.12
3	1600.00	0.09	8.32	1.72
4	617824.00	36.18	61.14	12.66
5	18000.00	1.05	5.44	1.13
6	774984.00	45.38	272.16	56.32
7	400.00	0.02	3.08	0.64
TOTAL	1707784.00		483.00	

AVERAGE EQUIVELANT SPHEREICAL VOLUME= 12.69

DIVERSITY INDICES:

MARGALEF'S INDEX = 2.09

SHANNON-WEAVER INDEX = 3.33

```
*  RAT    ST1      68      *
*                          *
*  31 AUG 87 (DAY 243)     *
****************************
```

SPECIES=38
STRATA DEPTH=
STRATA VOL.=
FILE NAME = ST1C1AUG87

REC #	SPECIES	CELL VOLUME	CORR. FACT.	RAW COUNT	ESD	CELLS /LITER	BIOMASS mg/m^3
	GROUP 1						
3	MERISMOPEDIA GLAUCA	75	7184	2	5.23	14368	1.08
4	APHANIZOMENON FLOS-AQUAE	3500	200	30	18.84	6000	21.00
5	APHANIZOMENON FLOS-AQUAE	96000	200	3	56.81	600	57.60
6	ANABAENA CIRCINALIS	5590	200	11	22.02	2200	12.30
7	ANABAENA CYLINDRICA	980	200	3	12.32	600	0.59
	GROUP 2						
8	CHLAMYDOMONAS SPP.	110	7184	1	5.94	7184	0.79
9	CHLAMYDOMONAS SPP.	520	7184	1	9.98	7184	3.74
10	DICTYOSPHAERIUM SIMPLEX	15	7184	8	3.06	57472	0.86
11	MONORAPHIDIUM SETIFORME	100	7184	2	5.76	14368	1.44
12	MONORAPHIDIUM CONTORTUM	40	7184	2	4.24	14368	0.57
13	CRUCIGENIELLA SPP.	50	7184	4	4.57	28736	1.44
14	BOTRYOCOCCUS BRAUNII	26500	200	2	38.99	400	10.60
15	TETRAEDRON CAUDATA	15	7184	1	3.06	7184	0.11
	GROUP 4						
16	SMALL CHRYSOPHYCEAE	50	7184	46	4.57	330464	16.52
17	CHRYSOCHROMULINA PARVA	50	7184	19	4.57	136496	6.82
18	MALLOMONAS CAUDATA	4000	200	4	19.69	800	3.20
19	DINOBRYON DIVERGENS	125	7184	17	6.20	122128	15.27
20	CHRYSOCHROMULINA BRIV.LAU.	350	7184	5	6.99	35920	13.65
21	BICOECA LACUSTRIS	380	7184	8	8.99	57472	21.84
22	SALPINGOECA SP.	140	7184	28	6.44	201152	28.16
23	GLOEOBOTRYS LIMNETICUS	110	7184	2	5.94	14368	1.58
24	STELEXMONAS DICHOTOMS	110	7184	3	5.94	21552	2.37
	GROUP 5						
25	MELOSIRA SP.	2500	7184	1	16.84	7184	17.96
26	FRAGILARIA CROTONENSIS	145	200	20	6.52	4000	0.58
27	SYNEDRA ACUS	145	200	2	6.52	400	0.06
28	SYNEDRA ACUS	400	200	27	9.14	5400	2.16
29	SYNEDRA ULNA	2300	200	2	16.38	400	0.92
30	ASTERIONELLA FORMOSA	150	200	115	8.57	23000	3.45
31	ASTERIONELLA FORMOSA	225	200	56	7.35	11200	2.52
32	STEPHANODISCUS ASTREAE	24425	200	34	36.00	6800	166.09
	GROUP 6						
33	RHODOMONAS MINUTA	80	7184	54	5.35	387936	31.03
34	RHODOMONAS MINUTA	340	7184	34	8.66	244256	83.05
35	CRYPTOMONAS EROSA	2450	200	55	16.73	11000	26.95
36	CRYPTOMONAS MARSSONII	1725	200	3	14.86	600	1.04
37	CRYPTOMONAS ROSTRATIFORM	5325	200	2	21.67	400	2.13
38	KATABLEPHARIS OVALIS	100	7184	21	5.76	150864	15.09
	GROUP 7						
39	GYMNODINIUM SP.	14900	200	1	30.53	200	2.98
40	PERIDINIUM INCONSPICUM	3200	200	6	18.28	1200	3.84

********** SUMMARY **********

GROUP NUMBER	CELLS/L	% OF TOTAL	BIOMASS mg/m^3	% OF TOTAL
1	23768.00	1.23	92.56	15.92
2	136896.00	7.07	19.54	3.36
3	0.00	0.00	0.00	0.00
4	920352.00	47.54	109.42	18.82
5	58384.00	3.02	193.74	33.32
6	795056.00	41.07	159.28	27.40
7	1400.00	0.07	6.82	1.17
TOTAL	1935856.00		581.36	

AVERAGE EQUIVELANT SPHERICAL VOLUME= 12.83

DIVERSITY INDICES:

```
**********************************
* RAT    STI      69             *
*                                *
* 31 AUG 87 (DAY 243)            *
**********************************
```

```
* SPECIES=37
STRATA DEPTH=
STRATA VOL.=
FILE NAME = STI31AUG87
```

REC #	SPECIES	CELL VOLUME	CORR. FACT.	RAW COUNT	ESD	CELLS /LITER	BIOMASS mg/m^3
	GROUP 1						
3	APHANIZOMENON FLOS-AQUAE	3500	200	218	18.64	43600	152.60
4	APHANIZOMENON FLOS-AQUAE	36000	200	23	40.97	4600	165.60
5	ANABAENA CIRCINALIS	7460	200	170	24.24	34000	253.64
6	ANABAENA SP.	48800	200	3	45.34	600	29.28
	GROUP 2						
7	CHLAMYDOMONAS SPP.	80	7184	1	5.35	7184	0.57
8	CHLAMYDOMONAS SPP.	160	7184	2	6.74	14368	2.30
9	PEDIASTRUM DUPLEX	77900	200	5	52.99	1000	77.90
10	SCENEDESMUS QUADRICAUDA	80	7184	8	5.35	57472	4.60
11	DICTYOSPHAERIUM SIMPLEX	10	7184	24	2.67	172416	1.72
12	MONORAPHIDIUM SETIFORME	90	7184	10	5.56	71840	6.47
13	MONORAPHIDIUM CONTORTUM	30	7184	4	3.86	28736	0.86
14	ANKYRA JUDAI	40	7184	2	4.24	14368	0.57
	GROUP 3						
15	TRACHELOMONAS VOLVOCINA	5200	200	6	21.49	1200	6.24
	GROUP 4						
16	SMALL CHRYSOPHYCEAE	50	7184	41	4.57	294544	14.73
17	CHRYSOCHROMULINA PARVA	50	7184	28	4.57	201152	10.06
18	MALLOMONAS CAUDATA	4000	200	9	19.69	1800	7.20
19	MALLOMONAS PSEUDOCORONATA	2440	200	6	16.70	1200	2.93
20	MALLOMONAS AKROKOMOS	140	7184	1	8.44	7184	1.01
21	CHRYSOCHROMULINA BRIV.LAU.	380	7184	1	8.99	7184	2.73
22	BICOECA LACUSTRIS	380	7184	4	8.99	28736	10.93
23	SALPINGOECA SP.	380	7184	3	8.99	21552	8.19
	GROUP 5						
24	MELOSIRA ITALICA	18400	7184	4	32.75	28736	528.74
~~25~~	~~TRUELLARIA FENESTRATA~~	~~2100~~	~~200~~	~~13~~	~~15.97~~	~~2600~~	~~5.46~~
26	FRAGILARIA CROTONENSIS	125	200	80	6.20	16000	2.00
27	SYNEDRA ACUS	130	200	6	6.29	1200	0.16
28	SYNEDRA ACUS	400	200	14	9.14	2800	1.12
29	SYNEDRA ULNA	2300	200	3	16.38	600	1.38
30	ASTERIONELLA FORMOSA	130	200	401	6.29	80200	10.43
31	ASTERIONELLA FORMOSA	220	200	109	7.49	21800	4.80
32	STEPHANODISCUS ASTREAE	24400	200	49	35.99	9800	239.12
	GROUP 6						
33	RHODOMONAS MINUTA	80	7184	33	5.35	237072	18.97
34	RHODOMONAS MINUTA	340	7184	46	8.66	330464	112.36
35	CRYPTOMONAS EROSA	2700	200	36	17.28	7200	19.44
36	CRYPTOMONAS MARSSONII	1800	200	23	15.09	4600	8.28
37	CRYPTOMONAS ROSTRATIFORM	4900	200	16	21.07	3200	15.68
38	KATABLEPHARIS OVALIS	100	7184	25	5.76	179600	17.96
	GROUP 7						
39	PERIDINIUM INCONSPICUM	3200	200	4	18.28	800	2.56

CONT'D: RAT LAKE STN 2 31 AUG 87

********** SUMMARY **********

GROUP NUMBER	CELLS/L	% OF TOTAL	BIOMASS mg/m^3	% OF TOTAL
1	82800.00	4.27	601.12	34.39
2	367384.00	18.93	95.00	5.44
3	1200.00	0.06	6.24	0.36
4	563352.00	29.02	57.76	3.30
5	163736.00	8.42	792.36	45.34
6	762136.00	39.26	192.68	11.02
7	800.00	0.04	2.56	0.15
TOTAL	1941008.00		1747.72	

****

AVERAGE EQUIVELANT SPHEREICAL VOLUME= 14.72

DIVERSITY INDICES:

MARGALEF'S INDEX = 2.49

SHANNON-WEAVER INDEX = 3.79

RAT STC

31 AUG 87 (DAY 243)

SPECIES=38
STRATA DEPTH=
STRATA VOL.=
FILE NAME = STCC1AUG87

REC #	SPECIES	CELL VOLUME	CORR. FACT.	RAW COUNT	ESD	CELLS /LITER	BIOMASS mg/m^3
	GROUP 1						
3	APHANIZOMENON FLOS-AQUAE	3500	200	37	18.84	7400	25.90
4	APHANIZOMENON FLOS-AQUAE	36000	200	1	40.97	200	7.20
5	ANABAENA CIRCINALIS	5450	200	5	21.83	1000	5.45
6	ANABAENA SP.	29650	200	1	38.40	200	5.93
7	LYNGBYA SP.	300	7184	1	8.31	7184	2.16
	GROUP 2						
8	CHLAMYDOMONAS SPP.	50	7184	2	4.57	14368	0.72
9	PEDIASTRUM DUPLEX	54300	200	1	46.93	200	10.86
10	OOCYSTIS LACUSTRIS	190	7184	5	7.13	35920	6.82
11	MONORAPHIDIUM SETIFORME	100	7184	3	5.76	21552	2.16
12	MONORAPHIDIUM CONTORTUM	35	7184	4	4.06	28736	1.01
13	CLOSTERIUM SP.	1400	200	1	13.83	200	0.28
	GROUP 3						
14	TRACHELOMONAS VOLVOCINA	5250	200	3	21.56	600	3.15
	GROUP 4						
15	SMALL CHRYSOPHYCEAE	50	7184	69	4.57	495696	24.78
16	LARGE CHRYSOPHYCEAE	380	7184	2	8.99	14368	5.46
17	CHRYSOCHROMULINA PARVA	50	7184	10	4.57	71840	3.59
18	MALLOMONAS CAUDATA	4000	200	6	19.69	1200	4.80
19	MALLOMONAS PSEUDOCORONATA	2450	200	3	16.73	600	1.47
20	DINOBRYON BAVARICUM	130	7184	2	6.29	14368	1.87
21	BICOECA LACUSTRIS	380	7184	3	8.99	21552	8.19
22	SALPINGOECA SP.	380	7184	3	8.99	21552	8.19
	GROUP 5						
23	MELOSIRA GRANULATA	4300	7184	1	20.18	7184	30.89
24	MELOSIRA ITALICA	15250	7184	1	30.77	7184	109.56
25	CYCLOTELLA SPP.	9250	200	14	21.56	2800	14.78
26	RHIZOSOLENIA ERIENSE	1000	7184	1	12.41	7184	7.18
27	TABELLARIA FENESTRATA	2100	200	11	15.69	2200	4.62
28	SYNEDRA ACUS	400	200	29	9.14	5800	2.32
29	SYNEDRA ULNA	2300	200	2	16.38	400	0.92
30	ASTERIONELLA FORMOSA	130	7184	29	6.29	208336	27.08
31	ASTERIONELLA FORMOSA	220	200	54	7.49	10800	2.38
32	STEPHANODISCUS ASTREAE	24400	200	27	35.99	5400	131.76
	GROUP 6						
33	RHODOMONAS MINUTA	80	7184	56	5.35	402304	32.18
34	RHODOMONAS MINUTA	340	7184	70	8.66	502880	170.98
35	CRYPTOMONAS EROSA	2450	200	119	16.73	23800	58.31
36	CRYPTOMONAS MARSSONII	1850	200	27	15.23	5400	9.99
37	CRYPTOMONAS ROSTRATIFORM	5200	200	4	21.49	800	4.16
38	KATABLEPHARIS OVALIS	100	7184	19	5.76	136496	13.65
	GROUP 7						
39	GYMNODINIUM SP.	12450	200	3	28.76	600	7.47
40	PERIDINIUM INCONSPICUM	3350	200	7	18.56	1400	4.69

CONT'D: RAT LAKE STN 3 31 AUG 87

********** SUMMARY **********

GROUP NUMBER	CELLS/L	% OF TOTAL	BIOMASS mg/m^3	% OF TOTAL
1	15984.00	0.76	46.64	6.11
2	100976.00	4.83	21.84	2.86
3	600.00	0.03	3.15	0.41
4	641176.00	30.68	58.35	7.65
5	257288.00	12.31	331.41	43.45
6	1071680.00	51.28	289.27	37.92
7	2000.00	0.10	12.16	1.59
TOTAL	2089704.00		762.83	

****

AVERAGE EQUIVELANT SPHEREICAL VOLUME= 15.99

DIVERSITY INDICES:

MARGALEF'S INDEX = 2.54

SHANNON-WEAVER INDEX = 3.12

APPENDIX B3. Phytoplankton data from Sipiwesk Lake, 1987.

Group	
1	Cyanophyceae - blue greens
2	Chlorophyceae - greens
3	Euglenophyceae - euglenophytes
4	Chrysophyceae - chrysophytes
5	Bacillariophyceae - diatoms
6	Cryptophyceae - cryptophytes
7	Peridineae - dinoflagellates

```
**********************************
*  SIPIWESK     ST1                *
*                                  *
*  13 MAY 87 (DAY 133)             *
**********************************
```

\# SPECIES=31
STRATA DEPTH=
STRATA VOL.=
FILE NAME = ST113MAY87

REC #	SPECIES	CELL VOLUME	CORR. FACT.	RAW COUNT	ESD	CELLS /LITER	BIOMASS mg/m^3
	GROUP 1						
3	APHANIZOMENON FLOS-AQUAE	3500	200	1	18.84	200	0.70
	GROUP 2						
4	CHLOROGONIUM MAXIMUM	7300	200	1	24.07	200	1.46
5	MONORAPHIDIUM SETIFORME	100	7184	14	5.76	100576	10.06
6	BOTRYOCOCCUS BRAUNII	26500	200	1	36.99	200	5.30
	GROUP 3						
7	EUGLENA ACUS	4600	200	1	20.63	200	0.92
8	TRACHELOMONAS VOLVOCINA	5200	200	39	21.49	7800	40.56
	GROUP 4						
9	SMALL CHRYSOPHYCEAE	50	7184	29	4.57	208336	10.42
10	LARGE CHRYSOPHYCEAE	380	7184	4	8.99	28736	10.92
11	CHRYSOCHROMULINA PARVA	50	7184	40	4.57	287360	14.37
12	MALLOMONAS SPP.	4100	200	3	19.86	600	2.46
13	CHRYSOSPHAERELLA LONGISP.	20550	200	1	33.98	200	4.11
14	CHRYSOCHROMULINA BRIV.LAU.	380	7184	5	8.99	35920	13.65
15	SALPINGOECA SP.	380	7184	14	8.99	100576	38.22
16	STELEXMONAS DICHOTOMS	100	7184	12	5.76	86208	8.62
	GROUP 5						
17	MELOSIRA GRANULATA	28000	7184	1	37.67	7184	201.15
18	CYCLOTELLA SPP.	10	7184	1	2.67	7184	0.07
19	TABELLARIA FENESTRATA	2100	200	2	15.89	400	0.84
20	SYNEDRA ACUS	400	200	16	9.14	3200	1.28
21	ASTERIONELLA FORMOSA	140	200	91	6.44	18200	2.55
22	ASTERIONELLA FORMOSA	220	200	3	7.49	600	0.13
23	STEPHANODISCUS ASTREAE	3600	200	3	19.02	600	2.16
24	DIATOMA SP	100	200	10	5.76	2000	0.20
	GROUP 6						
25	RHODOMONAS MINUTA	80	7184	49	5.35	352016	28.16
26	RHODOMONAS MINUTA	340	7184	76	8.66	545984	185.63
27	CRYPTOMONAS EROSA	2700	200	150	17.28	30000	81.00
28	CRYPTOMONAS MARSSONII	2900	200	19	17.69	3800	11.02
29	CRYPTOMONAS ROSTRATIFORM	4200	200	10	20.02	2000	8.40
30	KATABLEPHARIS OVALIS	100	7184	90	5.76	646560	64.66
	GROUP 7						
31	GYMNODINIUM HELVETICUM	19000	200	2	33.11	400	7.60
32	GYMNODINIUM SP.	16250	200	5	31.43	1000	16.25
33	PERIDINIUM INCONSPICUM	2800	200	9	17.49	1800	5.04

********** SUMMARY **********

GROUP NUMBER	CELLS/L	% OF TOTAL	BIOMASS mg/m^3	% OF TOTAL
1	200.00	0.01	0.70	0.09
2	100976.00	4.07	16.82	2.16
3	3000.00	0.12	41.48	5.33
4	747936.00	30.16	102.76	13.21
5	39368.00	1.59	208.38	26.79
6	1580360.00	63.72	378.87	48.70
7	3200.00	0.13	28.89	3.71
TOTAL	2480040.00		777.91	

AVERAGE EQUIVELANT SPHEREICAL VOLUME= 15.62

DIVERSITY INDICES:

```
**************************
* SIPIWESK    ST2 76     *
*                        *
* 13 MAY 87 (DAY 133)    *
**************************
```

SPECIES=72
STRATA DEPTH=
STRATA VOL.=
FILE NAME = ST213MAY87

REC #	SPECIES	CELL VOLUME	CORR. FACT.	RAW COUNT	ESD	CELLS /LITER	BIOMASS mg/m^3
	****						
	GROUP 1						
	****						
3	GOMPHOSPHAERIA LACUSTRIS	61600	200	1	49.00	200	12.32
4	APHANIZOMENON FLOS-AQUAE	3500	200	9	18.84	1800	6.30
	****						
	GROUP 2						
	****						
5	CHLOROGONIUM MAXIMUM	7400	200	1	24.18	200	1.48
6	SCENEDESMUS BREVISPINA	40	7184	2	4.24	14368	0.57
7	MONORAPHIDIUM SETIFORME	100	7184	2	5.76	14368	1.44
8	MONORAPHIDIUM CONTORTUM	35	7184	3	4.06	21552	0.75
9	CLOSTERIUM KUTZINGII	1270	200	1	13.44	200	0.25
10	BOTRYOCOCCUS BRAUNII	41600	200	1	42.99	200	8.32
	****						
	GROUP 4						
	****						
11	SMALL CHRYSOPHYCEAE	50	7184	44	4.57	316096	15.80
12	CHRYSOCHROMULINA PARVA	50	7184	46	4.57	344832	17.24
13	DINOBRYON SOCIALE	300	7184	15	8.31	107760	32.33
14	CHRYSOSPHAERELLA LONGISP.	41600	200	1	42.99	200	8.32
15	CHRYSOCHROMULINA BRIV.LAU.	230	7184	2	8.99	14368	5.46
16	BICOECA AINIKIAE	500	7184	1	9.85	7184	3.59
17	SALPINGOECA SP.	380	7184	4	8.99	28736	10.92
18	STELEXMONAS DICHOTOMS	100	7184	6	5.76	43104	4.31
	****						
	GROUP 5						
	****						
19	FRAGILARIA CONSTRUENS	11450	200	4	27.94	800	9.16
20	SYNEDRA ACUS	400	200	92	9.14	18400	7.36
21	SYNEDRA ULNA	2300	200	5	16.38	1000	2.30
22	ASTERIONELLA FORMOSA	130	200	407	6.25	81400	10.58
23	ASTERIONELLA FORMOSA	220	200	14	7.49	2800	0.62
24	STEPHANODISCUS ASTREAE	3600	200	3	19.02	600	2.16
25	DIATOMA SP	100	200	47	5.76	9400	0.94
	****						
	GROUP 6						
	****						
26	RHODOMONAS MINUTA	80	7184	76	5.35	545984	43.68
27	RHODOMONAS MINUTA	340	7184	53	8.66	380752	129.46
28	CRYPTOMONAS EROSA	2700	200	13	17.28	2600	7.02
29	CRYPTOMONAS MARSSONII	2375	200	12	16.55	2400	5.70
30	CRYPTOMONAS ROSTRATIFORM	4200	200	3	20.01	600	2.52
31	KATABLEPHARIS OVALIS	100	7184	16	5.76	114944	11.49
	****						
	GROUP 7						
	****						
32	GYMNODINIUM SP.	18050	200	4	32.55	800	14.44
33	PERIDINIUM INCONSPICUM	2900	200	1	17.69	200	0.58
34	PERIDINIUM ACICULIFERRIM	11400	200	1	27.92	200	2.28

********** SUMMARY **********

GROUP NUMBER	CELLS/L	% OF TOTAL	BIOMASS mg/m^3	% OF TOTAL
1	2000.00	0.10	18.62	4.90
2	50888.00	2.45	12.82	3.38
3	0.00	0.00	0.00	0.00
4	862280.00	41.49	97.98	25.80
5	114400.00	5.51	33.12	8.72
6	1047280.00	50.40	199.87	52.64
7	1200.00	0.06	17.30	4.56
TOTAL	2078048.00		379.70	

AVERAGE EQUIVELANT SPHEREICAL VOLUME= 15.64

DIVERSITY INDICES:
MARGALEF'S INDEX = 2.13
SHANNON-WEAVER INDEX = 3.05

****
* SIPIWESA STD *
*
* 13 MAY 87 (DAY 133) *
****

SPECIES=30
STRATA DEPTH=
STRATA VOL.=
FILE NAME = STDSNA:87

REC #	SPECIES	CELL VOLUME	CORR. FACT.	RAW COUNT	ESD	CELLS /LITER	BIOMASS mg.m-3
	**********						
	GROUP 1						
	**********						
3	APHANIZOMENON FLOS-AQUAE	3500	200	2	18.84	400	1.40
4	ANABAENA SP.	1400	7184	1	13.88	7184	10.06
5	LYNGBYA SP.	300	7184	1	8.31	7184	2.16
	**********						
	GROUP 2						
	**********						
6	CHLAMYDOMONAS SPP.	125	7184	1	6.20	7184	0.90
7	PEDIASTRUM DUPLEX	77950	200	1	53.00	200	15.59
8	BOTRYOCOCCUS BRAUNII	41600	200	2	42.99	400	16.64
	**********						
	GROUP 3						
	**********						
9	TRACHELOMONAS VOLVOCINA	5275	200	1	21.60	200	1.06
	**********						
	GROUP 4						
	**********						
10	SMALL CHRYSOPHYCEAE	50	7184	29	4.57	208336	10.42
11	CHRYSOCHROMULINA PARVA	50	7184	82	4.57	589086	29.45
12	SPINIFIROMONAS TRIORALIS	175	7184	8	6.94	57472	10.06
13	DINOBRYON BAVARICUM	360	7184	11	9.83	79024	28.45
14	DINOBRYON SERTULARIA	200	7184	12	7.26	86208	17.24
15	CHRYSOIKOS SKUJA	30	7184	1	3.86	7184	0.22
16	SALPINGOECA SP.	380	7184	6	8.99	43104	16.33
17	STELEXMONAS DICHOTOMS	100	7184	24	5.76	172416	17.24
	**********						
	GROUP 5						
	**********						
18	SYNEDRA ACUS	130	200	4	6.29	800	0.10
19	SYNEDRA ACUS	400	200	39	9.14	7800	3.12
20	SYNEDRA ULNA	2300	200	3	16.38	600	1.38
21	ASTERIONELLA FORMOSA	130	200	136	6.29	27200	3.54
22	ASTERIONELLA FORMOSA	200	200	2	7.26	400	0.08
23	STEPHANODISCUS ASTREAE	3600	200	3	19.02	600	2.16
24	DIATOMA SP	100	200	34	5.76	6800	0.68
	**********						
	GROUP 6						
	**********						
25	RHODOMONAS MINUTA	80	7184	131	5.35	941104	75.29
26	RHODOMONAS MINUTA	340	7184	40	8.66	287360	97.70
27	CRYPTOMONAS EROSA	2700	200	9	17.28	1800	4.86
28	CRYPTOMONAS MARSSONII	2450	200	4	16.73	800	1.96
29	CRYPTOMONAS ROSTRATIFORM	4480	200	1	20.45	200	0.90
	**********						
	GROUP 7						
	**********						
30	GYMNODINIUM SP.	16250	200	3	31.43	600	9.75
31	PERIDINIUM INCONSPICUM	2900	200	3	17.69	600	1.74
32	PERIDINIUM ACICULIFERRIM	14200	200	3	30.04	600	8.52

********** SUMMARY **********

GROUP NUMBER	CELLS/L	% OF TOTAL	BIOMASS mg/m^3	% OF TOTAL
1	14768.00	0.58	13.61	3.50
2	7784.00	0.31	33.13	8.52
3	200.00	0.01	1.06	0.27
4	1242832.00	48.88	129.46	33.28
5	44200.00	1.74	11.06	2.84
6	1231264.00	48.42	180.71	46.45
7	1800.00	0.07	20.01	5.14
TOTAL	2542848.00		389.03	

AVERAGE EQUIVELANT SPHEREICAL VOLUME= 14.44

DIVERSITY INDICES:
MARGALEF'S INDEX = 1.97

****
* SIPIWESK ST1 *
*
* 09 JUN 87 (DAY 160) *
****

SPECIES=18
STRATA DEPTH=
STRATA VOL.=
FILE NAME = ST109JUN87

REC #	SPECIES	CELL VOLUME	CORR. FACT.	RAW COUNT	ESD	CELLS /LITER	BIOMASS mg/m^3
	GROUP 1						
3	APHANIZOMENON FLOS-AQUAE	3500	200	9	19.84	1800	6.30
	GROUP 3						
4	CHLAMYDOMONAS SPP.	100	7184	1	5.76	7184	0.72
5	CLOSTERIUM HUTZINGII	1450	200	2	14.04	400	0.58
6	BOTRYOCOCCUS BRAUNII	41600	200	4	42.99	800	33.28
7	BULBOCHAETE SP	23450	200	49	35.51	9800	229.81
	GROUP 4						
8	SMALL CHRYSOPHYCEAE	50	7184	32	4.57	229888	11.49
9	LARGE CHRYSOPHYCEAE	380	7184	7	8.99	50288	19.11
10	CHRYSOCHROMULINA PARVA	50	7184	5	4.57	35920	1.80
11	EPHYRION SP.	30	7184	1	3.86	7184	0.22
12	SALPINGOECA SP.	100	7184	9	5.76	64656	6.47
	GROUP 5						
13	CYCLOTELLA SPP.	30	7184	1	3.86	7184	0.22
14	DIATOMA SP	140	200	3	6.44	600	0.08
	GROUP 6						
15	RHODOMONAS MINUTA	80	7184	73	5.35	524432	41.95
16	RHODOMONAS MINUTA	340	7184	5	8.66	35920	12.21
17	CRYPTOMONAS EROSA	2800	200	4	17.49	800	2.24
18	KATABLEPHARIS OVALIS	100	7184	4	5.76	28736	2.87
	GROUP 7						
17	GYMNODINIUM SP.	15700	200	1	31.07	200	3.14
20	PERIDINIUM INCONSPICUM	3000	200	2	17.97	400	1.20

********** SUMMARY **********

GROUP NUMBER	CELLS/L	% OF TOTAL	BIOMASS mg/m^3	% OF TOTAL
1	1800.00	0.18	6.30	1.69
2	18184.00	1.81	264.39	70.75
3	0.00	0.00	0.00	0.00
4	387936.00	38.55	39.08	10.46
5	7784.00	0.77	0.30	0.08
6	589888.00	58.63	59.28	15.86
7	600.00	0.06	4.34	1.16
TOTAL	1006192.00		373.69	

****

AVERAGE EQUIVELANT SPHEREICAL VOLUME= 13.41

DIVERSITY INDICES:
MARGALEF'S INDEX = 1.23
SHANNON-WEAVER INDEX = 2.21

```
**********************************
*  SIPIWESK     ST2              *
*                                *
*  09 JUN 87 (DAY 160)           *
**********************************
```

SPECIES=43
STRATA DEPTH=
STRATA VOL.=
FILE NAME = ST209JUN87

REC #	SPECIES	CELL VOLUME	CORR. FACT.	RAW COUNT	ESD	CELLS /LITER	BIOMASS mg/m^3
	GROUP 1						
3	GOMPHOSPHAERIA LACUSTRIS	12500	200	1	28.79	200	2.50
4	APHANIZOMENON FLOS-AQUAE	3500	200	3	18.84	600	2.10
5	ANABAENA CIRCINALIS	4100	200	7	19.86	1400	5.74
6	ANABAENA SP.	1675	200	20	14.73	4000	6.70
7	LYNGBYA SP.	300	7184	1	8.31	7184	2.16
	GROUP 2						
8	CHLAMYDOMONAS SFP.	40	7184	3	4.24	21552	0.86
9	CHLAMYDOMONAS SPP.	130	7184	4	6.29	28736	3.74
10	PEDIASTRUM DUPLEX	69450	200	1	51.00	200	13.89
11	PEDIASTRUM TETRAS	100	7184	4	5.76	28736	2.87
12	CHODATELLA SF.	60	7184	1	4.86	7184	0.43
13	SCENEDESMUS QUADRICAUDA	80	7184	4	5.33	28736	2.30
14	MONORAPHIDIUM SETIFORME	90	7184	2	5.56	14368	1.29
15	MONORAPHIDIUM CONTORTUM	30	7184	19	3.86	136496	4.09
16	CLOSTERIUM KUTZINGII	1550	200	2	14.36	400	0.62
17	BOTRYOCOCCUS BRAUNII	41600	200	3	43.99	600	24.96
18	TETRAEDRON CAUDATA	15	7184	1	3.06	7184	0.11
	GROUP 3						
19	TRACHELOMONAS VOLVOCINA	5200	200	1	21.49	200	1.04
	GROUP 4						
20	SMALL CHRYSOPHYCEAE	50	7184	23	4.57	165232	8.26
21	LARGE CHRYSOPHYCEAE	380	7184	4	8.99	28736	10.92
22	CHRYSOCHROMULINA PARVA	150	7184	14	4.57	100576	5.03
23	DINOBRYON BAVARICUM	360	7184	6	8.83	43104	15.52
24	DINOBRYON SERTULARIA	190	7184	6	7.13	43104	8.19
25	BITRICHIA CHODATII	65	7184	1	4.99	7184	0.47
26	CHRYSOCHROMULINA BRIV.LAU.	1380	7184	4	8.99	28736	10.92
27	SALPINGOECA SP.	380	7184	3	8.99	21552	8.19
28	STELEXMONAS DICHOTOMS	100	7184	1	5.76	7184	0.72
	GROUP 5						
29	MELOSIRA SP.	2500	7184	1	16.84	7184	17.96
30	CYCLOTELLA SFP.	30	7184	5	3.86	35920	1.08
31	TABELLARIA FENESTRATA	2150	200	15	16.01	3000	6.45
32	FRAGILARIA CROTONENSIS	140	200	25	6.44	5000	0.70
33	FRAGILARIA CONSTRUENS	99950	200	1	57.58	200	19.99
34	SYNEDRA ACUS	400	200	61	9.14	12200	4.88
35	ASTERIONELLA FORMOSA	130	200	365	6.29	73000	9.49
36	ASTERIONELLA FORMOSA	220	200	57	7.49	11400	2.51
37	ASTERIONELLA FORMOSA	2300	200	4	16.38	800	1.84
38	STEPHANODISCUS ASTREAE	3600	200	9	19.02	1800	6.48
39	DIATOMA SP	100	200	30	5.76	6000	0.60
	GROUP 6						
40	RHODOMONAS MINUTA	80	7184	23	5.33	165232	13.22
41	RHODOMONAS MINUTA	340	7184	3	8.66	21552	7.33
42	CRYPTOMONAS EROSA	2700	200	16	17.28	3200	8.64
43	KATABLEPHARIS OVALIS	100	7184	6	5.76	43104	4.31
	GROUP 7						
44	GYMNODINIUM SP.	16230	200	7	31.45	1400	22.72
45	PERIDINIUM INCONSPICUM	2700	200	9	17.28	1800	4.86

CONT'D: SIPIWESK LAKE STN2 09 JUNE87

********** SUMMARY **********

GROUP NUMBER	CELLS/L	% OF TOTAL	BIOMASS mg/m 3	% OF TOTAL
1	13084.00	1.17	19.20	6.94
2	274192.00	24.35	55.17	19.93
3	200.00	0.02	1.04	0.38
4	445408.00	39.56	68.21	24.65
5	156504.00	13.90	71.98	26.01
6	233083.00	20.70	33.50	12.10
7	3200.00	0.28	27.65	9.99
TOTAL	1125976.00		276.74	

****

AVERAGE EQUIVELANT SPHEREICAL VOLUME= 13.32

DIVERSITY INDICES:

MARGALEF'S INDEX = 3.01

SHANNON-WEAVER INDEX = 4.19

```
**********************************
*  SIPIWESA     ST3               *
*                                 *
*  09 JUN 87 (DAY 160)            *
**********************************
```

```
                                    # SPECIES=25
                                    STRATA DEPTH=
                                    STRATA VOL.=
                                    FILE NAME = ST309JUN87
```

REC #	SPECIES	CELL VOLUME	CORR. FACT.	RAW COUNT	ESD	CELLS /LITER	BIOMASS mg / l
	********** GROUP 1 **********						
3	APHANIZOMENON FLOS-AQUAE	350	200	6	8.74	1600	0.56
4	ANABAENA CIRCINALIS	7200	200	13	23.96	2600	18.72
5	ANABAENA SP.	2000	200	10	15.63	2000	4.00
6	LYNGBYA SP.	300	7184	1	8.31	7184	2.16
	********** GROUP 2 **********						
7	CHLAMYDOMONAS SPP.	130	7184	2	6.29	14368	1.87
8	PEDIASTRUM DUPLEX	77950	200	6	53.00	1200	93.54
9	CHODATELLA SP.	100	7184	1	5.76	7184	0.72
10	DICTYOSPHAERIUM SIMPLEX	15	7184	4	3.06	28736	0.43
11	MONORAPHIDIUM CONTORTUM	35	7184	9	4.06	64656	2.26
12	CLOSTERIUM KUTZINGII	1050	200	1	15.23	200	0.37
	********** GROUP 4. **********						
13	SMALL CHRYSOPHYCEAE	50	7184	18	4.57	129312	6.47
14	CHRYSOCHROMULINA PARVA	50	7184	22	4.57	158048	7.90
15	DINOBRYON SERTULARIA	340	7184	1	8.66	7184	2.44
16	CHRYSOCHROMULINA BRIV.LAU.	380	7184	1	8.99	7184	2.73
17	SALPINGOECA SP.	380	7184	2	8.99	14368	5.46
18	STELEXMONAS DICHOTOMS	100	7184	2	5.76	14368	1.44
	********** GROUP 5 **********						
19	MELOSIRA SP.	2825	7184	1	17.54	7184	20.29
20	CYCLOTELLA SPP.	30	7184	1	3.85	7184	0.22
21	TABELLARIA FENESTRATA	2100	200	21	15.89	4200	8.82
22	FRAGILARIA CROTONENSIS	140	200	1	6.44	200	0.03
23	FRAGILARIA CONSTRUENS	99950	200	6	57.55	1200	119.94
24	SYNEDRA ACUS	140	200	8	6.44	1600	0.22
25	SYNEDRA ACUS	400	200	53	9.14	10600	4.24
26	SYNEDRA ULNA	2300	200	1	16.38	200	3.46
27	ASTERIONELLA FORMOSA	130	200	325	6.29	65000	8.45
28	ASTERIONELLA FORMOSA	220	200	176	7.49	35200	7.83
29	STEPHANODISCUS ASTREAE	3600	200	10	19.02	2000	7.20
30	**DIATOMA SP**	**100**	**200**	**33**	**5.76**	**6600**	**0.66**
	********** GROUP 6 **********						
31	RHODOMONAS MINUTA	80	7184	92	5.35	660928	52.87
32	RHODOMONAS MINUTA	340	7184	18	8.66	129312	43.97
33	CRYPTOMONAS EROSA	2700	200	58	17.28	11600	31.32
34	CRYPTOMONAS MARSSONII	2550	200	24	16.95	4800	12.24
35	CRYPTOMONAS ROSTRATIFORM	4200	200	7	20.02	1400	5.88
36	KATABLEPHARIS OVALIS	100	7184	8	5.76	57472	5.75
	********** GROUP 7 **********						
37	PERIDINIUM INCONSPICUM	2700	200	1	17.28	200	0.54

```
            ************ SUMMARY ************
```

GROUP NUMBER	CELLS/L	% OF TOTAL	BIOMASS mg/m 3	% OF TOTAL
1	13384.00	0.91	25.44	5.28
2	113344.00	7.73	99.19	20.58
3	0.00	0.00	0.00	0.00
4	330464.00	22.52	26.44	5.48
5	141508.00	9.65	170.36	37.01
6	865512.00	58.98	152.03	31.54
7	200.00	0.01	0.54	0.11
TOTAL	1467472.00		481.99	

AVERAGE EQUIVELANT SPHEREICAL VOLUME= 12.82

DIVERSITY INDICES:

MARGALEF'S INDEX = 2.39

```
**********************************
*  SIPIWESK     ST1               *
*                                 *
*  08 JUL 87 (DAY 189)            *
**********************************
```

SPECIES=28
STRATA DEPTH=
STRATA VOL.=
FILE NAME = ST108JUL87

REC #	SPECIES	CELL VOLUME	CORR. FACT.	RAW COUNT	ESD	CELLS /LITER	BIOMASS mg/m^3
	GROUP 1						
3	SYNECHOCOCCUS SP.	2	7184	20	1.56	142680	0.29
4	APHANIZOMENON FLOS-AQUAE	3500	200	501	18.84	100200	350.70
5	APHANIZOMENON FLOS-AQUAE	46500	200	10	44.62	2000	93.00
6	ANABAENA CIRCINALIS	7050	200	25	23.79	5000	35.25
	GROUP 2						
7	CHLAMYDOMONAS SPP.	110	7184	3	5.94	21552	2.37
8	PEDIASTRUM DUPLEX	2200	200	1	16.14	200	0.44
9	MONORAPHIDIUM CONTORTUM	30	7184	3	3.86	21552	0.65
10	COELASTRUM SP.	12500	200	5	28.79	1000	12.50
11	ELAKATOTHRIX GELATINOSA	30	7184	2	3.86	14368	0.43
12	CLOSTERIUM SP.	1400	200	35	13.83	7000	9.80
13	BOTRYOCOCCUS BRAUNII	36000	200	1	40.97	200	7.20
14	SCHROEDERIA SETIGERA	130	7184	14	6.29	100576	13.07
15	BULBOCHAETE SP	22160	200	6	34.85	1200	26.59
	GROUP 3						
16	EUGLENA ACUS	8700	200	1	25.52	200	1.74
17	TRACHELOMONAS VOLVOCINA	5250	200	4	21.56	800	4.20
	GROUP 4						
18	SMALL CHRYSOPHYCEAE	50	7184	23	4.57	165232	8.26
19	CHRYSOCHROMULINA PARVA	50	7184	12	4.57	86208	4.31
20	MALLOMONAS CAUDATA	6000	200	7	22.55	1400	8.40
21	BITRICHIA CHODATII	30	7184	1	3.86	7184	0.22
22	BICOECA LACUSTRIS	380	7184	1	8.99	7184	2.73
23	SALPINGOECA SP.	380	7184	8	8.99	57472	21.84
	GROUP 6						
24	RHODOMONAS MINUTA	80	7184	43	5.35	308912	36.21
25	RHODOMONAS MINUTA VAR. NANNOPLANCTICA	340	7184	4	8.66	28736	7.77
26	CRYPTOMONAS EROSA	2700	200	13	17.28	2600	7.02
27	CRYPTOMONAS MARSSONII	2250	200	4	16.26	800	1.80
28	KATABLEPHARIS OVALIS	100	7184	6	5.76	43104	4.31
	GROUP 7						
29	GYMNODINIUM SP.	15380	200	1	30.95	200	3.08
30	PERIDINIUM INCONSPICUM	2825	200	6	17.54	1200	3.39

SUMMARY

GROUP NUMBER	CELLS/L	% OF TOTAL	BIOMASS mg/m^3	% OF TOTAL
1	250880.00	19.70	479.24	71.57
2	167648.00	13.16	73.08	10.91
3	1000.00	0.08	5.94	0.89
4	324680.00	25.50	45.76	6.83
5	0.00	0.00	0.00	0.00
6	527832.00	41.45	59.11	8.83
7	1400.00	0.11	6.43	0.97
TOTAL	1273440.00		669.56	

AVERAGE EQUIVELANT SPHEREICAL VOLUME= 15.92

DIVERSITY INDICES:
MARGALEF'S INDEX = 1.92
SHANNON-WEAVER INDEX = 3.12

SIPIWESK ST2

08 JUL 87 (DAY 189)

SPECIES=40
STRATA DEPTH=
STRATA VOL.=
FILE NAME = ST208JUL87

REC #	SPECIES	CELL VOLUME	CORR. FACT.	RAW COUNT	ESD	CELLS /LITER	BIOMASS mg/m^3
	GROUP 1						
3	MERISMOPEDIA GLAUCA	30	7184	16	3.86	114944	3.45
4	APHANIZOMENON FLOS-AQUAE	3500	200	23	18.84	4600	16.10
5	ANABAENA PLANCTONICA	21950	200	30	34.74	6000	131.70
6	ANABAENA CIRCINALIS	8440	200	88	25.26	17600	148.54
7	LYNGBYA SP.	300	7184	1	8.31	7184	2.16
	GROUP 2						
8	CHLAMYDOMONAS SPP.	110	7184	1	5.94	7184	0.79
9	CHLAMYDOMONAS SPP.	520	7184	5	9.98	35920	18.68
10	PEDIASTRUM DUPLEX	65400	200	6	49.99	1200	78.48
11	OOCYSTIS SUBMARINA V LAC.	40	7184	10	4.24	71840	2.87
12	CHODATELLA SP.	80	7184	1	5.35	7184	0.57
13	MONORAPHIDIUM CONTORTUM	30	7184	38	3.86	272992	8.19
14	ANKYRA JUDAI	110	7184	1	5.94	7184	0.79
15	BOTRYOCOCCUS BRAUNII	41600	200	4	42.99	800	33.28
16	WESTELLA SP.	30	7184	29	3.86	208336	6.25
	GROUP 3						
17	EUGLENA ACUS	11200	200	3	27.76	600	6.72
18	TRACHELOMONAS VOLVOCINA	5275	200	2	21.60	400	2.11
	GROUP 4						
19	SMALL CHRYSOPHYCEAE	50	7184	50	4.57	359200	17.96
20	LARGE CHRYSOPHYCEAE	380	7184	9	8.99	64656	24.57
21	CHRYSOCHROMULINA PARVA	50	7184	9	4.57	64656	3.23
22	DINOBRYON BAVARICUM	480	7184	24	9.71	172416	82.76
23	BICOECA AINIKIAE	520	7184	3	9.98	21552	11.21
24	SALPINGOECA SP.	380	7184	1	8.97	7184	2.73
25	STELEXMONAS DICHOTOMS	110	7184	4	5.94	28736	3.16
	GROUP 5						
26	MELOSIRA SP.	2800	7184	1	17.49	7184	20.12
27	CYCLOTELLA SPP.	30	7184	16	3.86	114944	3.45
28	TABELLARIA FENESTRATA	2150	200	8	16.01	1600	3.44
29	SYNEDRA ACUS	140	200	57	6.44	11400	1.60
30	SYNEDRA ACUS	400	200	24	9.14	4800	1.92
31	SYNEDRA ULNA	2300	200	7	16.38	1400	3.22
32	ASTERIONELLA FORMOSA	130	200	118	6.29	23600	3.07
33	ASTERIONELLA FORMOSA	220	200	40	7.49	8000	1.76
34	STEPHANODISCUS ASTREAE	3600	200	3	19.02	600	2.16
	GROUP 6						
35	RHODOMONAS MINUTA	80	7184	41	5.35	294544	23.56
36	RHODOMONAS MINUTA	340	7184	13	8.66	93392	31.75
37	CRYPTOMONAS EROSA	2700	200	49	17.28	9800	26.46
38	CRYPTOMONAS MARSSONII	2450	200	12	16.72	2400	5.88
39	CRYPTOMONAS ROSTRATIFORM	4925	200	6	21.11	1200	5.91
	GROUP 7						
40	GYMNODINIUM SP.	16280	200	5	31.45	1000	16.28
41	PERIDINIUM INCONSPICUM	2700	200	11	17.28	2200	5.94
42	PERIDINIUM GOSLAVIENSE	22160	200	1	34.85	200	4.43

CONT'D: SIPINESK LAKE STN 2 08 JULY 87

********** SUMMARY **********

GROUP NUMBER	CELLS/L	% OF TOTAL	BIOMASS mg/m^3	% OF TOTAL
1	150328.00	7.30	301.95	39.35
2	612640.00	29.73	149.91	19.54
3	1000.00	0.05	8.83	1.15
4	718400.00	34.86	145.62	18.96
5	173528.00	8.42	40.73	5.31
6	401336.00	19.48	93.57	12.20
7	3400.00	0.16	26.65	3.47
TOTAL	2060632.00		767.25	

****

AVERAGE EQUIVELANT SPHEREICAL VOLUME= 14.50

DIVERSITY INDICES:

MARGALEF'S INDEX = 2.68

SHANNON-WEAVER INDEX = 3.81

SIPIWESK ST3

08 JUL 87 (DAY 189)

SPECIES=43
STRATA DEPTH=
STRATA VOL.=
FILE NAME = ST308JUL87

REC #	SPECIES	CELL VOLUME	CORR. FACT.	RAW COUNT	ESD	CELLS /LITER	BIOMASS mg.m-3
	GROUP 1						
3	APHANIZOMENON FLOS-AQUAE	3500	200	30	18.84	6000	21.00
4	ANABAENA PLANCTONICA	20400	200	29	33.90	5800	118.32
5	ANABAENA CIRCINALIS	9050	200	56	25.84	11200	101.14
6	LYNGBYA SP.	300	7184	2	8.31	14368	4.31
	GROUP 2						
7	CHLAMYDOMONAS SPP.	40	7184	2	4.24	14368	0.57
8	CHLAMYDOMONAS SPP.	100	7184	5	5.76	35920	3.59
9	PEDIASTRUM DUPLEX	69450	200	2	51.00	400	27.78
10	OOCYSTIS LACUSTRIS	800	7184	6	11.52	43104	34.48
11	CHODATELLA SP.	100	7184	1	5.76	7184	0.72
12	DICTYOSPHAERIUM SIMPLEX	15	7184	32	3.06	229888	3.45
13	MONORAPHIDIUM SETIFORME	100	7184	2	5.76	14368	1.44
14	MONORAPHIDIUM CONTORTUM	30	7184	25	3.86	179600	5.39
15	CRUCIGENIELLA SPP.	15	7184	8	3.06	57472	0.86
16	COELASTRUM SP.	7225	200	4	23.99	800	5.78
17	EUASTRUM SPP.	1000	200	1	12.41	200	0.20
18	SMALL GREENS	15	7184	6	3.06	43104	0.65
19	BOTRYOCOCCUS BRAUNII	24400	200	2	35.99	400	9.76
20	SCHROEDERIA SETIGERA	130	7184	1	6.29	7184	0.93
	GROUP 3						
21	EUGLENA ACUS	9540	200	1	26.31	200	1.91
	GROUP 4						
22	SMALL CHRYSOPHYCEAE	50	7184	41	4.57	294544	14.73
23	CHRYSOCHROMULINA PARVA	150	7184	4	4.57	28736	1.44
24	DINOBRYON BAVARICUM	540	7184	1	10.10	7184	3.88
25	CHRYSOCHROMULINA BRIV.LAU.	380	7184	2	8.99	14368	5.46
26	BICOECA AINIKKIAE	650	7184	1	10.75	7184	4.67
27	SALPINGOECA SP.	380	7184	4	8.99	28736	10.92
	GROUP 5						
28	MELOSIRA ITALICA	27000	7184	1	37.22	7184	193.97
29	MELOSIRA SP.	5150	7184	1	21.43	7184	37.00
30	CYCLOTELLA SPP.	60	7184	6	4.86	43104	2.59
31	CYCLOTELLA SPP.	1750	200	1	14.95	200	0.35
32	SYNEDRA ACUS	150	200	23	6.29	4600	0.69
33	SYNEDRA ACUS	400	200	10	9.14	2000	0.80
34	SYNEDRA ULNA	2340	200	8	16.47	1600	3.74
35	ASTERIONELLA FORMOSA	130	200	134	6.29	26800	3.48
36	ASTERIONELLA FORMOSA	220	200	87	7.49	17400	3.83
37	STEPHANODISCUS ASTREAE	3600	200	3	19.02	600	2.16
	GROUP 6						
38	RHODOMONAS MINUTA	80	7184	66	5.35	474144	37.93
39	RHODOMONAS MINUTA	340	7184	17	8.66	122128	41.52
40	CRYPTOMONAS EROSA	2700	200	51	17.28	10200	27.54
41	CRYPTOMONAS MARSSONII	2375	200	36	16.35	7200	17.10
42	KATABLEPHARIS OVALIS	100	7184	5	5.76	35920	3.59
	GROUP 7						
43	GYMNODINIUM SP.	16700	200	3	31.71	600	10.02
44	PERIDINIUM INCONSPICUM	2800	200	6	17.49	1200	3.36
45	PERIDINIUM GOSLAVIENSE	22150	200	1	34.84	200	4.43

CONT'D: SIPISWESK LAKE STN3 08 JULY 87

********** SUMMARY **********

GROUP NUMBER	CELLS/L	% OF TOTAL	BIOMASS mg/m^3	% OF TOTAL
1	37368.00	2.06	244.77	31.49
2	633992.00	34.94	95.60	12.30
3	200.00	0.01	1.91	0.25
4	380752.00	20.98	41.09	5.29
5	110672.00	6.10	248.52	31.97
6	649592.00	35.80	127.69	16.43
7	2000.00	0.11	17.31	2.29
TOTAL	1814576.00		777.38	

****

AVERAGE EQUIVELANT SPHERICAL VOLUME= 14.36

DIVERSITY INDICES:

MARGALEF'S INDEX = 2.91

SHANNON-WEAVER INDEX = 3.67

```
**********************************
*  SIFIWES1     ST1               *
*                                 *
*  04 AUG 87 (DAY 216)            *
**********************************
```

```
                                        # SPECIES=30
                                        STRATA DEPTH=
                                        STRATA VOL.=
                                        FILE NAME = ST104AUG87
```

REC #	SPECIES	CELL VOLUME	CORR. FACT.	RAW COUNT	ESD	CELLS /LITER	BIOMASS mg/m^3
	********** GROUP 1 **********						
3	GOMPHOSPHAERIA LACUSTRIS	7225	200	10	23.99	2000	14.45
4	GOMPHOSPHAERIA LACUSTRIS	41600	200	6	42.99	1200	49.92
5	SYNECHOCOCCUS SP.	3	7184	16	1.79	114944	0.34
6	APHANIZOMENON FLOS-AQUAE	3000	7184	84	17.29	603456	1810.37
7	APHANIZOMENON FLOS-AQUAE	41280	200	75	42.84	15000	619.20
8	ANABAENA PLANCTONICA	21570	200	28	34.54	5600	120.79
9	ANABAENA CIRCINALIS	9000	200	97	25.91	19400	174.60
10	ANABAENA SP.	80	7184	44	5.35	316096	25.29
11	LYNGBYA SP.	250	7184	2	7.02	14368	3.59
	********** GROUP 2 **********						
12	CHLAMYDOMONAS SPP.	125	7184	1	6.20	7184	0.90
13	PAULSCHULZIA PSEUDEVOLVOX	170	7184	4	6.87	28736	4.89
14	MONORAPHIDIUM CONTORTUM	40	7184	14	4.24	100576	4.02
15	CLOSTERIUM SP.	1490	200	20	14.17	4000	5.96
16	BOTRYOCOCCUS BRAUNII	50960	200	1	46.00	200	10.19
	********** GROUP 3 **********						
17	EUGLENA ACUS	9300	200	6	26.09	1200	11.16
18	PHACUS SP.	5600	200	5	22.03	1000	5.60
	********** GROUP 4 **********						
19	SMALL CHRYSOPHYCEAE	50	7184	18	4.57	129312	6.47
20	CHRYSOCHROMULINA PARVA	50	7184	3	4.57	21552	1.08
21	MALLOMONAS CAUDATA	4600	200	32	20.63	6400	29.44
22	MALLOMONAS PSEUDOCORONATA	2900	200	1	17.69	200	0.58
23	BICOECA LACUSTRIS	380	7184	3	8.99	21552	8.19
24	SALPINGOECA SP.	380	7184	1	8.99	7184	2.73
25	DINOBRYON TUBAEFORME (SIL)	900	7184	1	11.98	7184	6.47
	********** GROUP 5 **********						
26	MELOSIRA GRANULATA	7900	7184	5	24.71	35920	283.77
27	MELOSIRA ITALICA	20650	7184	1	34.04	7184	148.35
28	SYNEDRA ACUS	400	200	2	9.14	400	0.16
	********** GROUP 6 **********						
29	RHODOMONAS MINUTA	80	7184	99	5.35	711216	56.90
30	RHODOMONAS MINUTA	340	7184	3	8.66	21552	7.33
31	CRYPTOMONAS EROSA	2700	200	36	17.28	7200	19.44
32	KATABLEPHARIS OVALIS	100	7184	11	5.76	79024	7.90

********** SUMMARY **********

GROUP NUMBER	CELLS/L	% OF TOTAL	BIOMASS mg/m^3	% OF TOTAL
1	1092064.00	47.67	2818.55	81.93
2	140696.00	6.14	25.96	0.75
3	2200.00	0.10	16.76	0.49
4	193384.00	8.44	54.95	1.60
5	43504.00	1.90	432.28	12.57
6	818992.00	35.75	91.57	2.66
7	0.00	0.00	0.00	0.00
TOTAL	2290840.00		3440.07	

****

AVERAGE EQUIVELANT SPHEREICAL VOLUME= 17.03

DIVERSITY INDICES:
MARGALEF'S INDEX = 1.98
SHANNON-WEAVER INDEX = 2.98

```
                    00
*****************************
*  SIPIWESK     ST2         *
*                           *
*  04 AUG 87 (DAY 216)      *
*****************************

                                  # SPECIES=49
                                  STRATA DEPTH=
                                  STRATA VOL.=
                                  FILE NAME = ST204AUG87
```

REC #	SPECIES	CELL VOLUME	CORR. FACT.	RAW COUNT	ESD	CELLS /LITER	BIOMASS mg/m^3
	**********						
	GROUP 1						
	**********						
3	APHANOTHECE SP.	2570	7184	3	16.99	21552	55.39
4	GOMPHOSPHAERIA LACUSTRIS	7200	200	19	23.96	3800	27.36
5	APHANIZOMENON FLOS-AQUAE	3500	200	282	18.84	56600	198.10
6	APHANIZOMENON FLOS-AQUAE	33840	200	11	40.13	2200	74.45
7	ANABAENA PLANCTONICA	19950	200	48	33.65	9600	191.52
8	ANABAENA CIRCINALIS	5750	200	43	22.23	8600	49.45
9	LYNGBYA SP.	300	7184	3	8.31	21552	6.47
	**********						
	GROUP 2						
	**********						
10	CHLAMYDOMONAS SPP.	520	7184	1	9.98	7184	3.74
11	PEDIASTRUM DUPLEX	44600	200	12	44.00	2400	107.04
12	SCENEDESMUS QUADRICAUDA	100	7184	4	5.76	28736	2.87
13	DICTYOSPHAERIUM SIMPLEX	150	7184	34	6.59	244256	36.64
14	MONORAPHIDIUM SETIFORME	110	7184	4	5.94	28736	3.16
15	MONORAPHIDIUM CONTORTUM	30	7184	8	3.86	57472	1.72
16	COELASTRUM SP.	12500	200	1	28.79	200	2.50
17	CLOSTERIUM KUTZINGII	1450	200	2	14.04	400	0.58
18	EUASTRUM SPP.	4250	200	1	20.10	200	0.85
19	STAURASTRUM PARADOXUM	10000	200	2	26.73	400	4.00
20	BOTRYOCOCCUS BRAUNII	38750	200	3	41.98	600	23.25
21	SPIROGYRA SP	86000	200	16	54.76	3200	275.20
22	TETRAEDRON CAUDATA	15	7184	1	3.06	7184	0.11
23	COLLODICTYON SP.	800	7184	4	11.52	28736	22.99
	**********						
	GROUP 3						
	**********						
24	EUGLENA ACUS	9050	200	1	25.86	200	1.81
25	TRACHELOMONAS VOLVOCINA	5275	200	2	21.60	400	2.11
	**********						
	GROUP 4						
	**********						
26	SMALL CHRYSOPHYCEAE	50	7184	26	4.57	186784	9.34
27	LARGE CHRYSOPHYCEAE	380	7184	2	8.97	14368	5.46
28	CHRYSOCHROMULINA PARVA	50	7184	8	4.57	57472	2.87
29	MALLOMONAS PSEUDOCORONATA	9000	200	2	25.81	400	3.60
30	DINOBRYON BAVARICUM	480	7184	1	9.71	7184	3.48
31	BICOECA LACUSTRIS	380	7184	7	8.99	50288	19.11
32	SALPINGOECA SP.	380	7184	21	8.99	150864	57.33
	**********						
	GROUP 5						
	**********						
33	MELOSIRA GRANULATA	4600	7184	1	20.63	7184	33.05
34	MELOSIRA ITALICA	23850	7184	2	35.71	14368	342.68
35	MELOSIRA SP.	660	7184	2	10.80	14368	9.48
36	MELOSIRA SP.	1600	7184	2	14.51	14368	22.99
37	CYCLOTELLA SPP.	60	7184	1	4.85	7184	0.43
38	TABELLARIA FENESTRATA	2100	200	16	15.89	3200	6.72
39	FRAGILARIA CROTONENSIS	140	200	22	6.44	4400	0.62
40	FRAGILARIA CONSTRUENS	84570	200	4	54.46	800	67.66
41	SYNEDRA ACUS	140	200	321	6.14	64200	8.99
42	SYNEDRA ACUS	400	200	15	9.14	3000	1.20
43	SYNEDRA ULNA	2325	200	8	16.44	1600	3.72
44	ASTERIONELLA FORMOSA	130	200	116	6.29	23200	3.02
45	ASTERIONELLA FORMOSA	220	200	105	7.49	21000	4.62
46	STEPHANODISCUS ASTREAE	3600	200	24	19.02	4800	17.28
	**********						
	GROUP 6						
	**********						
47	RHODOMONAS MINUTA	80	7184	86	5.35	617824	49.43
48	RHODOMONAS MINUTA	340	7184	23	8.66	165232	56.18
49	CRYPTOMONAS ERFSA	2800	200	87	17.49	17400	48.72
50	CRYPTOMONAS MARSSONII	2250	200	12	16.26	2400	5.40
51	KATABLEPHARIS OVALIS	100	7184	7	5.76	50288	5.03

CONT'D: SIPIWESK LAKE STN2 04 AUG 87

********** SUMMARY **********

GROUP NUMBER	CELLS/L	% OF TOTAL	BIOMASS mg/m^3	% OF TOTAL
1	123904.00	6.08	602.73	32.07
2	409704.00	20.10	484.65	25.78
3	600.00	0.03	3.92	0.21
4	467360.00	22.93	101.16	5.38
5	183672.00	9.01	522.44	27.79
6	853144.00	41.85	164.75	8.77
7	0.00	0.00	0.00	0.00
TOTAL	2038384.00		1879.66	

****

AVERAGE EQUIVELANT SPHERICAL VOLUME= 17.18

DIVERSITY INDICES:

MARGALEF'S INDEX = 3.30

SHANNON-WEAVER INDEX = 3.91

SIPIWESK STJ

04 AUG 87 (DAY 216)

SPECIES=36
STRATA DEPTH=
STRATA VOL.=
FILE NAME = ST304AUG87

REC #	SPECIES	CELL VOLUME	CORR. FACT.	RAW COUNT	ESD	CELLS /LITER	BIOMASS mg/m^3
	GROUP 1						
3	GOMPHOSPHAERIA LACUSTRIS	7200	200	17	23.96	3400	24.48
4	APHANIZOMENON FLOS-AQUAE	3500	200	306	18.84	61200	214.20
5	APHANIZOMENON FLOS-AQUAE	60000	200	6	48.57	1200	72.00
6	ANABAENA PLANCTONICA	25400	200	24	36.47	4800	121.92
7	ANABAENA CIRCINALIS	11290	200	39	27.83	7800	88.06
	GROUP 2						
8	CHLAMYDOMONAS SPP.	40	7184	1	4.24	7184	0.29
9	CHLAMYDOMONAS SPP.	520	7184	1	9.98	7184	3.74
10	PEDIASTRUM DUPLEX	69450	200	4	51.00	800	55.56
11	SCENEDESMUS SP.	80	7184	8	5.35	57472	4.60
12	MONORAPHIDIUM SETIFORME	110	7184	2	5.94	14368	1.58
13	MONORAPHIDIUM CONTORTUM	30	7184	4	3.86	28736	0.86
14	MONORAPHIDIUM SP A	70	7184	1	5.11	7184	0.50
15	CLOSTERIUM SP.	10300	200	1	26.99	200	2.06
16	BOTRYOCOCCUS BRAUNII	41600	200	1	42.99	200	8.32
17	SCHROEDERIA SETIGERA	130	7184	3	6.29	21552	2.80
	GROUP 4						
18	SMALL CHRYSOPHYCEAE	50	7184	20	4.57	143680	7.18
19	CHRYSOCHROMULINA PARVA	50	7184	18	4.57	129312	6.47
20	DINOBRYON BAVARICUM	450	7184	1	9.51	7184	3.23
21	STELEXMONAS DICHOTOMS	100	7184	2	5.76	14368	1.44
	GROUP 5						
22	MELOSIRA GRANULATA	19400	7184	1	33.34	7184	139.37
23	MELOSIRA ITALICA	31800	7184	1	39.31	7184	228.45
24	MELOSIRA SP.	76300	7184	1	52.62	7184	548.14
25	RHIZOSOLENIA ERIENSE	1000	7184	1	12.41	7184	7.18
26	SYNEDRA ACUS	140	200	384	6.44	76800	10.75
27	SYNEDRA ACUS	400	200	7	9.14	1400	0.56
28	SYNEDRA ULNA	2300	200	4	16.33	800	1.84
29	ASTERIONELLA FORMOSA	130	200	85	6.29	17000	2.21
30	ASTERIONELLA FORMOSA	320	800	46	7.47	7200	2.02
31	STEPHANODISCUS ASTREAE	3600	200	3	19.02	600	2.16
32	GYROZIGMA SP	7625	200	1	24.42	200	1.53
	GROUP 6						
33	RHODOMONAS MINUTA	80	7184	90	5.35	646560	51.72
34	RHODOMONAS MINUTA	340	7184	10	8.66	71840	24.43
35	CRYPTOMONAS EROSA	2700	200	64	17.28	12800	34.56
36	CRYPTOMONAS MARSSONII	2375	200	21	16.55	4200	9.98
37	KATABLEPHARIS OVALIS	100	7184	11	5.76	79024	7.90
	GROUP 7						
38	PERIDINIUM GOSLAVIENSE	19100	200	2	33.16	400	7.64

SUMMARY

GROUP NUMBER	CELLS/L	% OF TOTAL	BIOMASS mg/m^3	% OF TOTAL
1	78400.00	5.34	520.66	30.63
2	144380.00	9.87	80.31	4.72
3	0.00	0.00	0.00	0.00
4	294544.00	20.07	18.32	1.08
5	134736.00	9.18	944.22	55.55
6	814424.00	55.50	128.59	7.57
7	400.00	0.03	7.64	0.45
TOTAL	1467384.00		1699.73	

AVERAGE EQUIVELANT SPHEREICAL VOLUME= 18.21

DIVERSITY INDICES:

MARGALEF'S INDEX = 2.46
SHANNON-WEAVER INDEX = 3.16

SIFIWESK ST1

01 SEP 87 (DAY 244)

SPECIES=41
STRATA DEPTH=
STRATA VOL.=
FILE NAME = ST101SEP87

REC #	SPECIES	CELL VOLUME	CORR. FACT.	RAW COUNT	ESD	CELLS /LITER	BIOMASS mg/m^3
	GROUP 1						
3	GOMPHOSPHAERIA LACUSTRIS	7200	200	62	23.96	12400	89.28
4	GOMPHOSPHAERIA LACUSTRIS	91950	200	44	56.00	8800	809.16
5	APHANIZOMENON FLOS-AQUAE	3320	7184	68	18.51	488512	1621.86
6	APHANIZOMENON FLOS-AQUAE	62000	200	79	49.11	15800	979.60
7	ANABAENA PLANCTONICA	17100	200	43	31.96	8600	147.06
8	ANABAENA CIRCINALIS	9000	200	35	25.81	7000	63.00
9	ANABAENA SP.	80	7184	5	5.35	35920	2.87
	GROUP 2						
10	CHLAMYDOMONAS SPP.	130	7184	4	6.29	28736	3.74
11	CHLAMYDOMONAS SPP.	520	7184	1	9.98	7184	3.74
12	PAULSCHULZIA PSEUDEVOLVOX	30	7184	24	3.86	172416	5.17
13	DICTYOSPHAERIUM SIMPLEX	15	7184	24	3.06	172416	2.59
14	MONORAPHIDIUM CONTORTUM	30	7184	7	3.86	50238	1.51
15	COELASTRUM SP.	12500	200	4	28.79	800	10.00
16	ELAKATOTHRIX GELATINOSA	15	7184	3	3.06	21552	0.32
17	CLOSTERIUM SP.	1400	200	20	12.88	4000	5.60
18	STAURASTRUM PARADOXUM	10000	200	1	26.73	200	2.00
19	SMALL GREENS	15	7184	6	3.06	43104	0.65
20	BOTRYOCOCCUS BRAUNII	50950	200	4	46.00	800	40.76
	GROUP 3						
21	PHACUS SP.	4200	200	1	20.02	200	0.84
22	TRACHELOMONAS VOLVOCINA	5275	200	4	21.60	800	4.22
	GROUP 4						
23	SMALL CHRYSOPHYCEAE	50	7184	4	4.57	28736	1.44
24	CHRYSOCHROMULINA PARVA	50	7184	8	4.57	57472	2.87
25	MALLOMONAS CAUDATA	4300	200	14	20.18	2800	12.04
26	MALLOMONAS PSEUDOCORONATA	2900	200	26	17.69	5200	15.08
27	DINOBRYON BAVARICUM	390	7184	1	9.06	7184	2.80
28	SALPINGOECA SP.	380	7184	8	8.99	57472	21.84
29	STELEXMONAS DICHOTOMS	100	7184	2	5.76	14368	1.44
	GROUP 5						
30	MELOSIRA GRANULATA	19400	7184	11	33.34	79024	1533.07
31	MELOSIRA SP.	1880	7184	2	15.31	14368	27.01
32	CYCLOTELLA SPP.	60	7184	21	4.86	150864	9.05
33	SYNEDRA ULNA	2300	200	11	16.38	2200	5.06
34	ASTERIONELLA FORMOSA	130	200	77	6.29	15400	2.00
35	ASTERIONELLA FORMOSA	220	200	8	7.49	1600	0.35
36	STEPHANODISCUS ASTREAE	3600	200	17	19.02	3400	12.24
	GROUP 6						
37	RHODOMONAS MINUTA	90	7184	81	5.56	581904	52.37
38	RHODOMONAS MINUTA	340	7184	11	8.66	79024	26.87
39	CRYPTOMONAS EROSA	2900	200	130	17.69	26000	75.40
40	CRYPTOMONAS MARSSONII	2200	200	11	16.14	2200	4.84
	GROUP 7						
41	PERIDINIUM GOSLAVIENSE	12660	200	1	28.92	200	2.53
42	PERIDINIUM ACICULIFERRIM	4150	200	3	19.94	600	2.49
43	CERATIUM HIRUNDENELLA	50000	200	6	45.71	1200	60.00

CONT'D: SIPIWESK LAKE STN 1 01 SEPT 87

********** SUMMARY **********

GROUP NUMBER	CELLS/L	% OF TOTAL	BIOMASS mg/m^3	% OF TOTAL
1	577032.00	26.10	3712.85	65.54
2	501496.00	22.68	76.07	1.34
3	1000.00	0.05	5.06	0.09
4	173232.00	7.84	57.51	1.02
5	266856.00	12.07	1588.78	28.05
6	689128.00	31.17	159.48	2.82
7	2000.00	0.09	65.02	1.15
TOTAL	2210744.00		5664.76	

****

AVERAGE EQUIVELANT SPHEREICAL VOLUME= 17.49

DIVERSITY INDICES:

MARGALEF'S INDEX = 2.74

SHANNON-WEAVER INDEX = 3.58

SIPIWESA ST2

01 SEP 87 (DAY 244)

SPECIES=44
STRATA DEPTH=
STRATA VOL.=
FILE NAME = ST201SEP87

REC #	SPECIES	CELL VOLUME	CORR. FACT.	RAW COUNT	ESD	CELLS /LITER	BIOMASS mg/m^3
	GROUP 1						
3	GOMPHOSPHAERIA LACUSTRIS	8100	200	3	24.92	600	4.86
4	GOMPHOSPHAERIA LACUSTRIS	57900	200	2	48.00	400	23.16
5	MERISMOPEDIA GLAUCA	50	7184	11	4.57	79024	3.95
6	APHANIZOMENON FLOS-AQUAE	3300	200	220	18.47	44000	145.20
7	APHANIZOMENON FLOS-AQUAE	33840	200	1	40.13	200	6.77
8	ANABAENA PLANCTONICA	20750	200	5	34.09	1000	20.75
9	ANABAENA CIRCINALIS	6350	200	6	22.98	1200	**7.62**
10	LYNGBYA SP.	300	7184	6	8.31	43104	**12.93**
	GROUP 2						
11	CHLAMYDOMONAS SPP.	30	7184	16	3.86	114944	**3.45**
12	CHLAMYDOMONAS SPP.	110	7184	1	5.94	7184	0.79
13	PEDIASTRUM DUPLEX	50950	200	1	46.00	200	10.19
14	CHODATELLA SP.	80	7184	1	5.35	7184	0.57
15	DICTYOSPHAERIUM SIMPLEX	4	7184	30	1.97	215520	**0.86**
16	MONORAPHIDIUM SETIFORME	100	7184	4	5.76	28736	**2.87**
17	MONORAPHIDIUM CONTORTUM	300	7184	62	8.31	445408	**133.62**
18	CRUCIGENIELLA SPP.	15	7184	8	3.06	57472	0.86
19	CLOSTERIUM SP.	1350	200	6	13.71	1200	1.62
	GROUP 4						
20	SMALL CHRYSOPHYCEAE	50	7184	18	4.57	129312	6.47
21	LARGE CHRYSOPHYCEAE	380	7184	2	8.99	14368	5.46
22	CHRYSOCHROMULINA PARVA	50	7184	6	4.57	43104	**2.16**
23	DINOBRYON BAVARICUM	480	7184	1	9.71	7184	**3.45**
24	DINOBRYON SERTULARIA	420	7184	1	9.29	7184	**3.02**
25	BICOECA LACUSTRIS	380	7184	1	8.99	7184	**2.73**
26	SALPINGOECA SP.	380	7184	14	8.99	100576	**38.22**
	GROUP 5						
27	MELOSIRA GRANULATA	57350	7184	3	47.85	21552	**1236.01**
28	MELOSIRA SP.	2825	7184	1	17.54	7184	**20.29**
29	MELOSIRA SP.	42200	7184	3	43.20	21552	**909.49**
30	CYCLOTELLA SPP.	65	7184	4	4.99	28736	**1.87**
31	RHIZOSOLENIA ERIENSE	500	7184	6	9.85	43104	21.55
32	TABELLARIA FENESTRATA	2100	200	4	15.89	800	1.68
33	SYNEDRA ACUS	140	200	35	6.44	7000	0.98
34	SYNEDRA ACUS	400	200	20	9.14	4000	1.60
35	SYNEDRA ULNA	2300	200	3	16.38	600	1.38
36	ASTERIONELLA FORMOSA	130	200	376	6.29	75200	9.78
37	ASTERIONELLA FORMOSA	220	200	28	7.49	5600	1.23
38	STEPHANODISCUS ASTREAE	3600	200	4	19.02	800	2.88
39	GYROZIGMA SP	7650	200	2	24.45	400	3.06
	GROUP 6						
40	RHODOMONAS MINUTA	80	7184	91	5.35	653744	52.30
41	RHODOMONAS MINUTA	340	7184	16	8.66	114944	39.08
42	CRYPTOMONAS EROSA	2700	200	112	17.23	22400	60.48
43	CRYPTOMONAS MARSSONII	2450	200	17	16.73	3400	8.33
44	CRYPTOMONAS ROSTRATIFORM	4900	200	1	21.07	200	9.98
45	KATABLEPHARIS OVALIS	100	7184	7	5.76	50288	5.03
	GROUP 7						
46	PERIDINIUM GOSLAVIENSE	12650	200	1	28.91	200	2.53

CONT'D: SIPIWESK LAKE STN2 01 SEPT 87

********** SUMMARY **********

GROUP NUMBER	CELLS/L	% OF TOTAL	BIOMASS mg/m 3	% OF TOTAL
1	169528.00	7.01	225.24	7.98
2	877848.00	36.30	154.84	5.49
3	0.00	0.00	0.00	0.00
4	308912.00	12.78	61.50	2.18
5	216528.00	8.95	2211.80	78.37
6	844976.00	34.95	166.20	5.89
7	200.00	0.01	2.53	0.09
TOTAL	2417992.00		2822.11	

****

AVERAGE EQUIVELANT SPHEREICAL VOLUME= 15.52

DIVERSITY INDICES:

MARGALEF'S INDEX = 2.93

SHANNON-WEAVER INDEX = 1.72

SIPIWESK STN

01 SEP 87 (DAY 244)

SPECIES=40
STRATA DEPTH=
STRATA VOL.=
FILE NAME = ST301SEP87

REC #	SPECIES	CELL VOLUME	CORR. FACT.	RAW COUNT	ESD	CELLS /LITER	BIOMASS mg/m^3
	GROUP 1						
3	APHANOTHECE SP.	2570	7184	1	16.99	7184	18.46
4	GOMPHOSPHAERIA LACUSTRIS	7200	200	17	23.96	3400	24.48
5	GOMPHOSPHAERIA LACUSTRIS	57900	200	3	48.00	600	34.74
6	APHANIZOMENON FLOS-AQUAE	3000	200	191	17.89	38200	114.60
7	APHANIZOMENON FLOS-AQUAE	24500	200	6	36.03	1200	29.40
8	ANABAENA PLANCTONICA	17500	200	15	32.21	3000	52.50
9	ANABAENA CIRCINALIS	9325	200	45	26.11	9000	83.93
10	LYNGBYA SP.	220	7184	1	7.49	7184	1.58
	GROUP 2						
11	CHLAMYDOMONAS SPP.	80	7184	1	5.35	7184	0.57
12	CHLAMYDOMONAS SPP.	210	7184	3	7.37	21552	4.53
13	CHLAMYDOMONAS SPP.	900	7184	1	11.98	7184	6.47
14	PEDIASTRUM DUPLEX	77950	200	1	53.00	200	15.59
15	CHODATELLA SP.	100	7184	5	5.76	35920	3.59
16	SCENEDESMUS SP.	230	7184	4	7.60	28736	6.61
17	DICTYOSPHAERIUM SIMPLEX	15	7184	12	3.06	86208	1.29
18	MONORAPHIDIUM SETIFORME	100	7184	2	5.76	14368	1.44
19	MONORAPHIDIUM CONTORTUM	30	7184	33	3.86	237072	7.11
20	MONORAPHIDIUM MINUTUM	10	7184	3	2.67	21552	0.22
21	MOUGEOTIA SP.	9025	200	2	25.83	400	3.61
22	BOTRYOCOCCUS BRAUNII	36000	200	2	40.97	400	14.40
	GROUP 4						
23	SMALL CHRYSOPHYCEAE	50	7184	17	4.57	122128	6.11
24	CHRYSOCHROMULINA PARVA	50	7184	16	4.57	114944	5.75
25	BICOECA LACUSTRIS	380	7184	1	8.99	7184	2.73
26	STELEXMONAS DICHOTOMS	110	7184	4	5.94	28736	3.16
	GROUP 5						
27	MELOSIRA GRANULATA	42350	7184	4	43.25	28736	1216.97
28	MELOSIRA SP.	83350	7184	4	54.20	28736	2395.15
29	RHIZOSOLENIA ERIENSE	800	7184	7	11.52	50288	40.23
30	TABELLARIA FENESTRATA	2100	200	10	18.97	2000	4.20
31	SYNEDRA ACUS	130	200	13	6.29	2600	0.34
32	SYNEDRA ACUS	400	200	19	9.14	3800	1.52
33	SYNEDRA ULNA	2300	200	3	16.38	600	1.38
34	ASTERIONELLA FORMOSA	140	200	263	6.44	52600	7.36
35	ASTERIONELLA FORMOSA	220	200	81	7.49	16200	3.56
36	STEPHANODISCUS ASTREAE	3600	200	7	19.02	1400	5.04
	GROUP 6						
37	RHODOMONAS MINUTA	80	7184	106	5.35	761504	60.92
38	RHODOMONAS MINUTA	340	7184	31	8.66	222704	75.72
39	CRYPTOMONAS EROSA	2700	200	81	17.28	16200	43.74
40	CRYPTOMONAS MARSSONII	2400	200	25	16.61	5000	12.00
41	KATABLEPHARIS OVALIS	100	7184	30	5.76	215520	21.55
	GROUP 7						
42	PERIDINIUM GOSLAVIENSE	12600	200	5	28.87	1000	12.60

CONT'D: SIPINESK LAKE STN3 01 SEPT 87

********** SUMMARY **********

GROUP NUMBER	CELLS/L	% OF TOTAL	BIOMASS mg/m^3	% OF TOTAL
1	69768.00	3.15	359.69	8.28
2	460776.00	20.83	65.43	1.51
3	0.00	0.00	0.00	0.00
4	272992.00	12.34	17.74	0.41
5	186960.00	8.45	3675.75	84.59
6	1220928.00	55.19	213.93	4.92
7	1000.00	0.05	12.60	0.29
TOTAL	2212424.00		4345.14	

****

AVERAGE EQUIVELANT SPHEREICAL VOLUME= 16.95

DIVERSITY INDICES:

MARGALEF'S INDEX = 2.67

SHANNON-WEAVER INDEX = 3.51

APPENDIX B4. Phytoplankton data from Split Lake, 1987.

Group	
1	Cyanophyceae - blue greens
2	Chlorophyceae - greens
3	Euglenophyceae - euglenophytes
4	Chrysophyceae - chrysophytes
5	Bacillariophyceae - diatoms
6	Cryptophyceae - cryptophytes
7	Peridineae - dinoflagellates

SPLIT ST3

31 AUG 87 (DAY 243)

SPECIES=28
STRATA DEPTH=
STRATA VOL.=
FILE NAME = ST331AL887

REC #	SPECIES	CELL VOLUME	CORR. FACT.	RAW COUNT	ESD	CELLS /LITER	BIOMASS mg/m^3
	GROUP 1						
3	APHANIZOMENON FLOS-AQUAE	3500	200	4	18.84	800	2.80
4	ANABAENA PLANCTONICA	17500	200	1	32.31	200	3.50
	GROUP 2						
5	CHLAMYDOMONAS SPP.	100	7184	4	5.76	28736	2.87
6	CHLAMYDOMONAS SPP.	500	7184	5	9.85	35920	17.96
7	DICTYOSPHAERIUM SIMPLEX	15	7184	4	3.06	28736	0.43
8	MONORAPHIDIUM SETIFORME	100	7184	6	5.76	43104	4.31
9	MONORAPHIDIUM CONTORTUM	35	7184	1	4.06	7184	0.25
10	CRUCIGENIELLA SPP.	15	7184	4	3.06	28736	0.43
11	ANKYRA JUDAI	150	7184	1	6.59	7184	1.08
12	COLLODICTYON SP.	450	7184	23	9.51	165232	74.35
	GROUP 3						
13	EUGLENA ACUS	8300	200	2	25.12	400	3.32
14	TRACHELOMONAS VOLVOCINA	5200	200	27	21.49	5400	28.08
	GROUP 4						
15	SMALL CHRYSOPHYCEAE	50	7184	61	4.57	438224	21.91
16	CHRYSOCHROMULINA PARVA	50	7184	6	4.57	43104	2.16
17	BICOECA LACUSTRIS	380	7184	1	8.99	7184	2.73
	GROUP 5						
18	MELOSIRA ITALICA	20675	7184	2	34.05	14368	297.06
19	SYNEDRA ACUS	400	200	15	9.14	3000	1.20
20	SYNEDRA ULNA	2340	200	6	16.47	1200	2.81
21	ASTERIONELLA FORMOSA	130	200	4	6.29	800	0.10
22	STEPHANODISCUS ASTREAE	3600	200	17	19.02	3400	12.24
	GROUP 6						
23	RHODOMONAS MINUTA	80	7184	47	5.35	337648	27.01
24	RHODOMONAS MINUTA	340	7184	53	8.66	380752	129.46
25	CRYPTOMONAS EROSA	2700	200	99	17.28	19800	53.46
26	CRYPTOMONAS MARSSONII	2300	200	19	16.38	3800	8.74
27	CRYPTOMONAS ROSTRATIFORM	5600	200	4	22.03	800	4.48
28	KATABLEPHARIS OVALIS	100	7184	13	5.76	93392	9.34
	GROUP 7						
29	GYMNODINIUM SP.	16200	200	3	31.39	600	9.72
30	PERIDINIUM INCONSPICUM	3000	200	6	17.89	1200	3.60

SUMMARY

GROUP NUMBER	CELLS/L	% OF TOTAL	BIOMASS mg/m^3	% OF TOTAL
1	1000.00	0.06	6.30	0.87
2	344832.00	20.27	101.69	14.02
3	5800.00	0.34	31.40	4.33
4	488512.00	28.72	26.80	3.69
5	22768.00	1.34	313.41	43.21
6	836192.00	49.16	232.49	32.05
7	1800.00	0.11	13.32	1.84
TOTAL	1700904.00		725.40	

AVERAGE EQUIVELANT SPHERICAL VOLUME= 13.33

DIVERSITY INDICES:
MARGALEF'S INDEX = 1.88
SHANNON-WEAVER INDEX = 3.04

CONTO : SPLIT LAKE 31 AUG 87

********** SUMMARY **********

GROUP NUMBER	CELLS/L	% OF TOTAL	BIOMASS mg/m^3	% OF TOTAL
1	34400.00	1.60	291.05	0.78
2	377568.00	17.59	184.47	0.49
3	200.00	0.01	1.04	0.00
4	280176.00	13.05	38.51	0.10
5	809048.00	37.68	36738.40	98.34
6	645376.00	30.06	96.08	0.26
7	200.00	0.01	10.00	0.03
TOTAL	2146968.00		37359.55	

AVERAGE EQUIVELANT SPHEREICAL VOLUME= 17.94

DIVERSITY INDICES:

MARGALEF'S INDEX = 2.74

SHANNON-WEAVER INDEX = 3.88

```
**************************
* SPLIT6   ST2 101       *
*                        *
* 31 AUG 87 (DAY 243)    *
**************************
```

SPECIES=41
STRATA DEPTH=
STRATA VOL.=
FILE NAME = ST2J1AUG87

REC #	SPECIES	CELL VOLUME	CORR. FACT.	RAW COUNT	ESD	CELLS /LITER	BIOMASS mg/m^3
	*********						
	GROUP 1						
	*********						
3	GOMPHOSPHAERIA LACUSTRIS	31750	200	21	39.29	4200	133.35
4	APHANIZOMENON FLOS-AQUAE	3500	200	*121	18.84	26200	91.70
5	APHANIZOMENON FLOS-AQUAE	36000	200	4	40.97	800	28.80
6	ANABAENA PLANCTONICA	16250	200	8	31.43	1600	26.00
7	ANABAENA CIRCINALIS	7000	200	8	23.73	1600	11.20
	*********						
	GROUP 2						
	*********						
8	CHLAMYDOMONAS SPP.	100	7184	3	5.76	21552	2.16
9	CHLAMYDOMONAS SPP.	500	7184	8	9.85	57472	28.74
10	OOCYSTIS SUBMARINA V LAC.	40	7184	4	4.24	28736	1.15
11	MONORAPHIDIUM SETIFORME	100	7184	3	5.76	21552	2.16
12	MONORAPHIDIUM CONTORTUM	35	7184	3	4.06	21552	0.75
13	CRUCIGENIELLA SPP.	15	7184	16	3.06	114944	1.72
14	CLOSTERIUM SP.	1320	200	9	15.61	1800	2.38
15	BOTRYOCOCCUS BRAUNII	54360	200	5	47.00	1000	54.36
16	SPIROGRYA SP	73280	200	6	51.92	1200	87.94
17	WESTELLA SP.	30	7184	14	3.86	100576	3.02
18	TETRAEDRON CAUDATA	15	7184	1	3.06	7184	0.11
	*********						
	GROUP 3						
	*********						
19	TRACHELOMONAS HISPIDA	5200	200	1	21.49	200	1.04
	*********						
	GROUP 4						
	*********						
20	SMALL CHRYSOPHYCEAE	50	7184	16	4.57	114944	5.75
21	CHRYSOCHROMULINA PARVA	50	7184	12	4.57	86208	4.31
22	DINOBRYON SERTULARIA	270	7184	2	8.02	14368	3.88
23	BICOECA LACUSTRIS	380	7184	1	8.99	7184	2.73
24	SALPINGOECA SP.	380	7184	8	8.99	57472	21.84
	*********						
	GROUP 5						
	*********						
25	MELOSIRA GRANULATA	55150	7184	31	47.23	222704	12282.13
26	MELOSIRA ITALICA	45800	7184	29	44.39	208336	9541.79
27	MELOSIRA SP.	2825	7184	6	17.54	43104	121.77
28	MELOSIRA SP.	66190	7184	31	50.19	222704	14740.78
29	TABELLARIA FENESTRATA	2150	200	20	16.01	4000	8.60
30	FRAGILARIA CONSTRUENS	14725	200	6	30.41	1200	17.67
31	SYNEDRA ACUS	130	200	34	6.29	6800	0.88
32	SYNEDRA ACUS	400	200	28	9.14	5600	2.24
33	SYNEDRA ULNA	1300	200	5	13.54	1000	1.30
34	ASTERIONELLA FORMOSA	130	200	238	6.29	47600	6.19
35	ASTERIONELLA FORMOSA	200	200	208	7.26	41600	8.32
36	STEPHANODISCUS ASTREAE	3600	200	9	19.02	1800	6.48
37	DIATOMA SP	100	200	13	8.76	2600	0.26
	*********						
	GROUP 6						
	*********						
38	RHODOMONAS MINUTA	80	7184	72	5.35	517248	41.38
39	RHODOMONAS MINUTA	340	7184	15	8.66	107760	36.64
40	CRYPTOMONAS EROSA	2900	200	24	17.69	4800	13.92
41	CRYPTOMONAS MARSSONII	2250	200	6	16.26	1200	2.70
42	KATABLEPHARIS OVALIS	100	718	2	5.76	14368	1.44
	*********						
	GROUP 7						
	*********						
43	CERATIUM HIRUNDINELLA	50000	200	1	45.71	200	10.00

CONT'D: SPLIT LAKE STN 1 31 AUG 87

********** SUMMARY **********

GROUP NUMBER	CELLS/L	% OF TOTAL	BIOMASS mg/m^3	% OF TOTAL
1	36600.00	1.41	160.04	0.52
2	546984.00	21.01	41.12	0.13
3	600.00	0.02	3.90	0.01
4	538800.00	20.69	119.40	0.39
5	689704.00	26.49	30186.39	98.43
6	790272.00	30.35	149.77	0.49
7	600.00	0.02	7.04	0.02
TOTAL	2603360.00		30667.66	

AVERAGE EQUIVELANT SPHEREICAL VOLUME= 19.83

DIVERSITY INDICES:

MARGALEF'S INDEX = 2.30

SHANNON-WEAVER INDEX = 3.48

SPLIT ST1

31 AUG 87 (DAY 243)

SPECIES=35
STRATA DEPTH=
STRATA VOL.=
FILE NAME = ST131AUG87

REC #	SPECIES	CELL VOLUME	CORR. FACT.	RAW COUNT	ESD	CELLS /LITER	BIOMASS mg/m^3
	GROUP 1						
3	GOMPHOSPHAERIA LACUSTRIS	12500	200	20	28.79	4000	50.00
4	APHANIZOMENON FLOS-AQUAE	350	200	+134	8.74	26800	9.38
5	APHANIZOMENON FLOS-AQUAE	28500	200	10	37.90	2000	57.00
6	ANABAENA PLANCTONICA	16100	200	7	31.33	1400	22.54
7	ANABAENA CIRCINALIS	8800	200	12	25.62	2400	21.12
	GROUP 2						
8	CHLAMYDOMONAS SPP.	150	7184	2	6.59	14368	2.16
9	BLOEOCOCCUS SCHROETERI	69450	200	1	51.00	200	13.89
10	OOCYSTIS SUBMARINA V LAC.	60	7184	3	4.86	21552	1.29
11	DICTYOSPHAERIUM SIMPLEX	15	7184	60	3.06	431040	6.47
12	MONORAPHIDIUM SETIFORME	100	7184	4	5.76	28736	2.87
13	MONORAPHIDIUM CONTORTUM	35	7184	7	4.06	50288	1.76
14	CLOSTERIUM SP.	7300	200	2	24.07	400	2.92
15	BOTRYOCOCCUS BRAUNII	24400	200	2	35.99	400	9.76
	GROUP 3						
16	EUGLENA ACUS	8925	200	1	25.74	200	1.79
17	TRACHELOMONAS VOLVOCINA	5275	200	2	21.60	400	2.11
	GROUP 4						
18	SMALL CHRYSOPHYCEAE	50	7184	20	4.57	143680	7.18
19	CHRYSOCHROMULINA PARVA	50	7184	16	4.57	114944	5.75
20	SALPINGOECA SP.	380	7184	39	6.99	280176	106.47
	GROUP 5						
21	MELOSIRA GRANULATA	49400	7184	5	45.52	35920	1774.45
22	MELOSIRA ITALICA	43890	7184	56	43.76	402304	17657.12
23	MELOSIRA SP.	82700	7184	18	54.05	129312	10694.10
24	RHIZOSOLENIA ERIENSE	590	7184	2	10.41	14368	8.48
25	TABELLARIA FLOCCOLSA	52750	200	2	46.56	400	21.10
26	SYNEDRA ACUS	400	200	20	9.14	4000	1.60
27	SYNEDRA ULNA	2300	200	8	16.38	1600	3.68
28	ASTERIONELLA FORMOSA	140	200	248	6.44	49600	6.94
29	ASTERIONELLA FORMOSA	220	200	250	7.49	50000	11.00
30	STEPHANODISCUS ASTREAE	3600	200	11	19.02	2200	7.92
	GROUP 6						
31	RHODOMONAS MINUTA	80	7184	77	5.35	553168	44.25
32	RHODOMONAS MINUTA	340	7184	27	8.66	193968	65.95
33	CRYPTOMONAS EROSA	2700	200	46	17.28	9200	24.84
34	CRYPTOMONAS MARSSONII	2280	200	26	16.33	5200	11.86
35	KATABLEPHARIS OVALIS	100	7184	4	5.76	28736	2.87
	GROUP 7						
36	GYMNODINIUM SP.	16250	200	2	31.43	400	6.50
37	PERIDINIUM INCONSPICUM	2700	200	1	17.28	200	0.54

```
**********************************
*  SPLIT    ST3                  *
*                                 *
*  03 AUG 87 (DAY 215)           *
**********************************
```

SPECIES=27
STRATA DEPTH=
STRATA VOL.=
FILE NAME = ST303AUG87

REC #	SPECIES	CELL VOLUME	CORR. FACT.	RAW COUNT	ESD	CELLS /LITER	BIOMASS mg/m^3
	GROUP 1						
3	APHANIZOMENON FLOS-AQUAE	3500	200	5	18.84	1000	3.50
4	APHANIZOMENON FLOS-AQUAE	34500	200	1	40.39	200	6.90
5	ANABAENA CIRCINALIS	4900	200	4	21.07	800	3.92
	GROUP 2						
6	CHLAMYDOMONAS SPP.	190	7184	3	7.13	21552	4.09
7	CHLAMYDOMONAS SPP.	500	7184	3	9.85	21552	10.78
8	CHODATELLA SP.	80	7184	1	5.35	7184	0.57
9	SCENEDESMUS QUADRICAUDA	20	7184	4	3.37	28736	0.57
10	MONORAPHIDIUM SETIFORME	100	7184	2	5.76	14368	1.44
11	MONORAPHIDIUM CONTORTUM	35	7184	4	4.06	28736	1.01
12	SMALL GREENS	50	7184	6	4.57	43104	2.16
	GROUP 3						
13	TRACHELOMONAS VOLVOCINA	5275	200	11	21.60	2200	11.61
	GROUP 4						
14	SMALL CHRYSOPHYCEAE	50	7184	45	4.57	323280	16.16
15	CHRYSOCHROMULINA PARVA	50	7184	7	4.57	50288	2.51
16	MALLOMONAS CAUDATA	4900	200	1	21.07	200	0.98
17	DINOBRYON SERTULARIA	300	7184	3	8.31	21552	6.47
18	SALPINGOECA SP.	380	7184	11	8.99	79024	30.03
	GROUP 5						
19	SYNEDRA ACUS	100	200	6	5.76	1200	0.12
20	SYNEDRA ACUS	400	200	11	9.14	2200	0.88
21	ASTERIONELLA FORMOSA	220	200	4	7.49	800	0.18
22	STEPHANODISCUS ASTREAE	3600	200	3	19.02	600	2.16
	GROUP 6						
23	RHODOMONAS MINUTA	80	7184	60	5.35	431040	34.48
24	RHODOMONAS MINUTA	340	7184	16	8.66	114944	39.08
25	CRYPTOMONAS EROSA	2700	200	35	17.28	7000	18.90
26	CRYPTOMONAS MARSSONII	2250	200	2	16.24	400	0.90
27	KATABLEPHARIS OVALIS	100	7184	3	5.76	21552	2.16
	GROUP 7						
28	GYMNODINIUM SP.	20700	200	9	34.07	1800	37.26
29	PERIDINIUM INCONSPICUM	2600	200	5	17.06	1000	2.60

SUMMARY

GROUP NUMBER	CELLS/L	% OF TOTAL	BIOMASS mg/m^3	% OF TOTAL
1	2000.00	0.16	14.32	5.93
2	165232.00	13.47	20.62	8.54
3	2200.00	0.18	11.61	4.81
4	474344.00	38.68	56.15	23.26
5	4800.00	0.39	3.34	1.38
6	574936.00	46.88	95.52	39.57
7	2800.00	0.23	39.86	16.51
TOTAL	1226312.00		241.41	

AVERAGE EQUIVCLANT SPHEREICAL VOLUME= 12.42

DIVERSITY INDICES:

MARGALEF'S INDEX = 1.85
SHANNON-WEAVER INDEX = 2.90

CONT'D: SPLIT LAKE STN 2 03 AUG 87

********** SUMMARY **********

GROUP NUMBER	CELLS/L	% OF TOTAL	BIOMASS mg/m^3	% OF TOTAL
1	59752.00	2.50	235.84	21.32
2	376568.00	15.74	97.38	8.80
3	400.00	0.02	2.11	0.19
4	187184.00	7.82	26.36	2.38
5	29768.00	1.24	467.48	42.27
6	1737776.00	72.64	271.36	24.54
7	800.00	0.03	5.44	0.49
TOTAL	2392248.00		1105.98	

AVERAGE EQUIVELANT SPHERICAL VOLUME= 16.99

DIVERSITY INDICES:

MARGALEF'S INDEX = 2.86

SHANNON-WEAVER INDEX = 3.57

```
**************************
* SPLIT    ST2          *
*                       *
* 03 AUG 87 (DAY 215)   *
**************************
```

SPECIES=43
STRATA DEPTH=
STRATA VOL.=
FILE NAME = ST203AU387

REC #	SPECIES	CELL VOLUME	CORR. FACT.	RAW COUNT	ESD	CELLS /LITER	BIOMASS ug/m^3
	GROUP 1						
3	MICROCYSTIS VIRIDIS	1300	200	4	13.54	800	1.04
4	APHANOTHECE SP.	2550	7184	3	16.95	21552	54.96
5	GOMPHOSPHAERIA LACUSTRIS	5275	200	3	21.60	600	3.17
6	APHANIZOMENON FLOS-AQUAE	2500	200	148	16.84	29600	103.60
7	APHANIZOMENON FLOS-AQUAE	34500	200	3	40.39	600	20.70
8	ANABAENA PLANCTONICA	17300	200	3	32.09	600	10.38
9	ANABAENA CIRCINALIS	7000	200	30	23.73	6000	42.00
	GROUP 2						
10	CHLAMYDOMONAS SPP.	30	7184	6	3.86	43104	1.29
11	CHLAMYDOMONAS SPP.	500	7184	1	9.85	7184	3.59
12	PEDIASTRUM DUPLEX	54300	200	2	46.98	400	21.72
13	OOCYSTIS LACUSTRIS	890	7184	6	11.93	43104	38.36
14	MONORAPHIDIUM SETIFORME	100	7184	4	5.76	28736	2.87
15	MONORAPHIDIUM CONTORTUM	35	7184	15	4.06	107760	3.77
16	CRUCIGENIELLA SPP.	15	7184	16	3.06	114944	1.72
17	COELASTRUM SP.	36000	200	1	40.97	200	7.20
18	CLOSTERIUM SP.	1325	200	9	13.63	1800	2.39
19	CLOSTERIUM SP.	7850	200	1	24.66	200	1.57
20	ANKYRA JUDAI	140	7184	3	6.44	21552	3.02
21	BOTRYOCOCCUS BRAUNII	24400	200	2	35.99	400	9.76
22	TETRAEDRON CAUDATA	15	7184	1	3.06	7184	0.11
	GROUP 3						
23	TRACHELOMONAS VOLVOCINA	5275	200	2	21.60	400	2.11
	GROUP 4						
24	SMALL CHRYSOPHYCEAE	50	7184	18	4.57	129312	6.47
25	CHRYSOCHROMULINA PARVA	50	7184	2	4.57	14368	0.72
26	MALLOMONAS PSEUDOCORONATA	3200	200	1	18.28	200	0.64
27	DINOBRYON BAVARICUM	600	7184	1	10.46	7184	4.31
28	SALPINGOECA SP.	380	7184	5	8.99	35920	13.65
29	MALLOMONAS MAMATA (FURRY)	2900	200	1	17.69	200	0.58
	GROUP 5						
30	MELOSIRA GRANULATA	43500	7184	1	43.63	7184	312.50
31	MELOSIRA ITALICA	20100	7184	1	33.73	7184	144.40
32	SYNEDRA ACUS	130	200	3	6.29	600	0.08
33	SYNEDRA ACUS	400	200	16	9.14	3200	1.28
34	SYNEDRA ULNA	2340	200	3	16.47	600	1.40
35	ASTERIONELLA FORMOSA .	130	200	38	6.29	7600	0.99
36	ASTERIONELLA FORMOSA	220	200	8	7.49	1600	0.35
37	ETEPHANODISCUS ASTREAE	3600	200	9	19.02	1800	6.48
	GROUP 6						
38	RHODOMONAS MINUTA	80	7184	188	5.35	1350592	108.05
39	RHODOMONAS MINUTA	340	7184	40	8.66	287360	97.70
40	CRYPTOMONAS EROSA	2700	200	85	17.28	17000	45.90
41	CRYPTOMONAS MARSSONII	2280	200	13	16.32	2600	5.93
42	CRYPTOMONAS ROSTRATIFORM	4900	200	6	21.07	1200	5.88
43	KATABLEPHARIS OVALIS	100	7184	11	5.76	79024	7.90
	GROUP 7						
44	GYMNODINIUM SP.	19100	200	1	33.16	200	3.82
45	PERIDINIUM INCONSPICUM	2700	200	3	17.28	600	1.62

CONT'D: SPLIT LAKE STN 1 03AUG 87

********** SUMMARY **********

GROUP NUMBER	CELLS/L	% OF TOTAL	BIOMASS mg/m^3	% OF TOTAL
1	17000.00	0.60	152.77	9.80
2	504480.00	17.69	67.93	4.36
3	2600.00	0.09	13.65	0.88
4	301728.00	10.58	36.42	2.34
5	67288.00	2.36	881.51	56.57
6	1958776.00	68.67	399.71	25.65
7	400.00	0.01	6.14	0.39
TOTAL	2852272.00		1558.13	

****

AVERAGE EQUIVELANT SPHEREICAL VOLUME= 16.14

DIVERSITY INDICES:

MARGALEF'S INDEX = 2.83

SHANNON-WEAVER INDEX = 2.58

```
*********
* SPLIT    ST: 108      *
*                       *
*  03 AUG 87 (DAY 215)  *
*************************
```

SPECIES=43
STRATA DEPTH=
STRATA VOL.=
FILE NAME = ST108AU307

REC #	SPECIES	CELL VOLUME	CORR. FACT.	RAW COUNT	ESD	CELLS /LITER	BIOMASS mg/m^3
	*********						
	GROUP 1						
	*********						
3	GOMPHOSPHAERIA LACUSTRIS	12500	200	11	28.79	2200	27.50
4	GOMPHOSPHAERIA LACUSTRIS	15300	200	6	30.80	1200	18.36
5	APHANIZOMENON FLOS-AQUAE	3500	200	40	18.84	8000	28.00
6	APHANIZOMENON FLOS-AQUAE	39000	200	3	42.07	600	23.40
7	ANABAENA PLANCTONICA	17300	200	9	32.09	1800	31.14
8	ANABAENA CIRCINALIS	8400	200	14	25.22	2800	23.52
9	ANABAENA SP.	2125	200	2	15.95	400	0.85
	*********						
	GROUP 2						
	*********						
10	CHLAMYDOMONAS SPP.	190	7184	2	7.13	14368	2.73
11	GLOEOCOCCUS SCHROETERI	100	7184	16	5.76	114944	11.49
12	PEDIASTRUM DUPLEX	2025	200	1	15.70	200	0.41
13	OOCYSTIS LACUSTRIS	890	7184	1	11.93	7184	6.39
14	DICTYOSPHAERIUM SIMPLEX	15	7184	36	3.06	258624	3.88
15	MONORAPHIDIUM SETIFORME	100	7184	4	5.76	28736	2.87
16	MONORAPHIDIUM CONTORTUM	350	7184	6	8.74	43104	15.09
17	COELASTRUM SP.	42500	200	1	43.30	200	8.50
18	QUADRIGULA CLOSTEROIDES	30	7184	4	3.86	28736	0.86
19	CLOSTERIUM SP.	1900	200	3	15.37	600	1.14
20	STAURASTRUM SP.	10000	200	1	26.73	200	2.00
21	BOTRYOCOCCUS BRAUNII	24400	200	2	33.99	400	9.76
22	EUDORINA SP.	390	7184	1	9.06	7184	2.80
	*********						
	GROUP 3						
	*********						
23	TRACHELOMONAS VOLVOCINA	5250	200	13	21.56	2600	13.65
	*********						
	GROUP 4						
	*********						
24	SMALL CHRYSOPHYCEAE	50	7184	25	4.57	179600	8.98
25	CHRYSOCHROMULINA PARVA	50	7184	8	4.57	57472	2.87
26	BICOECA LACUSTRIS	380	7184	3	8.99	21552	8.19
27	SALPINGOECA SP.	380	7184	6	8.99	43104	16.38
	*********						
	GROUP 5						
	*********						
28	MELOSIRA ITALICA	22600	7184	5	35.59	35920	647.71
29	MELOSIRA SP.	1570	7184	2	14.42	14368	22.56
30	TABELLARIA FENESTRATA	2100	200	1	15.89	200	0.42
31	FRAGILARIA CROTONENSIS	145	200	15	6.52	3000	0.44
32	SYNEDRA ACUS	130	200	10	6.29	2000	0.26
33	SYNEDRA ACUS	400	200	12	9.14	2400	0.96
34	ASTERIONELLA FORMOSA	130	200	23	6.29	4600	0.60
35	ASTERIONELLA FORMOSA	220	200	12	7.49	2400	0.53
36	STEPHANODISCUS ASTREAE	3600	200	9	19.02	1800	6.48
37	DIATOMA SP	100	200	2	5.76	400	0.04
38	GYROZIGMA SP	7600	200	1	24.39	200	1.52
	*********						
	GROUP 6						
	*********						
39	RHODOMONAS MINUTA	80	7184	221	5.35	1587664	127.01
40	RHODOMONAS MINUTA	340	7184	38	8.66	272992	92.82
41	CRYPTOMONAS EROSA	2700	200	255	17.28	51000	137.70
42	CRYPTOMONAS MARSSONII	2250	200	43	16.26	8600	19.35
43	CRYPTOMONAS ROSTRATIFORM	7400	200	13	24.18	2600	19.24
44	KATABLEPHARIS OVALIS	100	7184	5	5.76	35920	3.59
	*********						
	GROUP 7						
	*********						
45	GYMNODINIUM SP.	15350	200	2	30.83	400	6.14

SFLIT ST3

06 JUL 87 (DAY 187)

SPECIES=33
STRATA DEPTH=
STRATA VOL.=
FILE NAME = ST306JUL87

REC #	SPECIES	CELL VOLUME	CORR. FACT.	RAW COUNT	ESD	CELLS /LITER	BIOMASS mg/m^3
	GROUP 1						
3	APHANIZOMENON FLOS-AQUAE	3500	200	67	18.84	13400	46.90
4	ANABAENA PLANCTONICA	18300	200	2	32.70	400	7.32
5	ANABAENA CIRCINALIS	4500	200	4	20.48	800	3.60
6	ANABAENA SP.	2800	200	3	17.49	600	1.68
7	LYNGBYA SP.	260	7184	1	7.92	7184	1.87
	GROUP 2						
8	CHLAMYDOMONAS SPP.	190	7184	3	7.13	21552	4.09
9	PEDIASTRUM DUPLEX	50900	200	1	45.98	200	10.18
10	CHODATELLA SP.	400	7184	1	9.14	7184	2.87
11	DICTYOSPHAERIUM SIMPLEX	100	7184	7	5.76	50288	5.03
12	MONORAPHIDIUM CONTORTUM	35	7184	10	4.06	71840	2.51
13	BOTRYOCOCCUS BRAUNII	41600	200	1	42.99	200	8.32
	GROUP 3						
14	EUGLENA ACUS	3800	200	1	19.36	200	0.76
15	TRACHELOMONAS VOLVOCINA	5275	200	3	21.60	600	3.17
	GROUP 4						
16	SMALL CHRYSOPHYCEAE	50	7184	6	4.57	43104	2.16
17	CHRYSOCHROMULINA PARVA	50	7184	8	4.57	57472	2.87
	GROUP 5						
18	MELOSIRA ITALICA	27300	7184	4	37.36	28736	784.49
19	MELOSIRA SP.	1570	7184	1	14.42	7184	11.28
20	CYCLOTELLA SPP.	10	7184	3	2.67	21552	0.22
21	CYCLOTELLA SPP.	14100	200	2	29.97	400	5.64
22	SYNEDRA ACUS	140	200	8	6.44	1600	0.22
23	SYNEDRA ACUS	400	200	31	9.14	6200	2.48
24	SYNEDRA ULNA	2900	200	5	16.38	1000	2.30
25	ASTERIONELLA FORMOSA	130	200	182	6.29	36400	4.73
26	ASTERIONELLA FORMOSA	220	200	52	7.49	10400	2.29
27	STEPHANODISCUS ASTREAE	3600	200	6	19.02	1200	4.32
28	DIATOMA SP	100	200	3	5.76	600	0.06
	GROUP 6						
29	RHODOMONAS MINUTA	80	7184	69	5.35	495696	39.66
30	RHODOMONAS MINUTA	340	7184	2	8.66	14368	4.89
31	CRYPTOMONAS EROSA	2700	200	6	17.28	1200	3.24
32	KATABLEPHARIS OVALIS	100	7184	1	5.76	7184	0.72
	GROUP 7						
33	GYMNODINIUM SP.	19100	200	2	33.16	400	7.64
34	PERIDINIUM INCONSPICUM	2600	200	2	17.06	400	1.04
35	PERIDINIUM ACICULIFERRUM	8100	200	1	24.92	200	1.62

SUMMARY

GROUP NUMBER	CELLS/L	% OF TOTAL	BIOMASS mg/m^3	% OF TOTAL
1	22384.00	2.46	61.37	6.26
2	151264.00	16.63	33.01	3.37
3	800.00	0.09	3.93	0.40
4	100576.00	11.06	5.03	0.51
5	115272.00	12.67	818.03	83.46
6	518448.00	56.99	48.50	4.95
7	1000.00	0.11	10.30	1.05
TOTAL	909744.00		980.16	

AVERAGE EQUIVELANT SPHEREICAL VOLUME= 16.05

```
*  SPLIT    ST2 110        *
*                          *
*  06 JUL 87 (DAY 187)     *
****************************
```

```
* SPECIES=35
STRATA DEPTH=
STRATA VOL.=
FILE NAME = ST206JUL87
```

REC #	SPECIES	CELL VOLUME	CORR. FACT.	RAW COUNT	ESD	CELLS /LITER	BIOMASS mg/m^3
	GROUP 1						
3	APHANIZOMENON FLOS-AQUAE	3500	200	15	18.84	3000	10.50
4	APHANIZOMENON FLOS-AQUAE	39000	200	1	42.07	200	7.80
5	ANABAENA PLANCTONICA	12200	200	21	28.56	4200	51.24
6	ANABAENA CIRCINALIS	8200	200	45	25.02	9000	73.80
7	ANABAENA SP.	4100	200	11	19.80	2200	9.02
8	LYNGBYA SP.	250	7184	6	7.82	43104	10.78
	GROUP 2						
9	CHLAMYDOMONAS SPP.	75	7184	5	5.23	35920	2.69
10	CHLAMYDOMONAS SPP.	520	7184	2	9.98	14368	7.47
11	PEDIASTRUM DUPLEX	41600	200	3	42.99	600	24.96
12	OOCYSTIS SUBMARINA V LAC.	50	7184	25	4.57	179600	8.98
13	SCENEDESMUS SP.	10	7184	6	2.67	43104	0.43
14	MONORAPHIDIUM SETIFORME	100	7184	12	5.76	86208	8.62
15	MONORAPHIDIUM CONTORTUM	35	7184	8	4.06	57472	2.01
16	CRUCIGENIELLA SPP.	15	7184	12	3.06	86208	1.29
17	ELAKATOTHRIX GELATINOSA	70	7184	3	5.11	21552	1.51
18	CLOSTERIUM SP.	340	200	3	8.66	600	0.20
19	BOTRYOCOCCUS BRAUNII	31000	200	1	38.98	200	6.20
	GROUP 4						
20	SMALL CHRYSOPHYCEAE	50	7184	47	4.57	337648	16.88
21	CHRYSOCHROMULINA PARVA	50	7184	30	4.57	215520	10.78
22	BICOECA LACUSTRIS	380	7184	1	8.99	7184	2.73
	GROUP 5						
23	MELOSIRA ITALICA	22200	7184	2	34.87	14368	318.97
24	MELOSIRA SP.	2825	7184	2	17.54	14368	40.59
25	RHIZOSOLENIA ERIENSE	350	7184	2	8.74	14368	5.03
26	SYNEDRA ACUS	400	200	44	9.14	8800	3.52
27	SYNEDRA ULNA	2300	200	6	16.38	1200	2.76
28	ASTERIONELLA FORMOSA	140	200	244	6.44	48800	6.83
29	ASTERIONELLA FORMOSA	270	200	65	7.49	13000	2.86
30	STEPHANODISCUS ASTREAE	3600	200	11	19.02	2200	7.92
31	DIATOMA SP	100	200	6	5.76	1200	0.12
	GROUP 6						
32	RHODOMONAS MINUTA	80	7184	47	5.35	337648	27.01
33	RHODOMONAS MINUTA	340	7184	28	8.66	201152	68.39
34	CRYPTOMONAS EROSA	2700	200	19	17.28	3800	10.26
35	CRYPTOMONAS MARSSONII	2450	200	2	16.73	400	0.98
36	KATABLEPHARIS OVALIS	100	7184	4	5.76	28736	2.87
	GROUP 7						
37	PERIDINIUM INCONSPICUM	2700	200	2	17.28	400	1.08

SUMMARY

GROUP NUMBER	CELLS/L	% OF TOTAL	BIOMASS mg/m^3	% OF TOTAL
1	61704.00	3.36	163.14	21.55
2	525832.00	28.60	64.37	8.50
3	0.00	0.00	0.00	0.00
4	560352.00	30.48	30.39	4.01
5	118304.00	6.44	388.60	51.33
6	571736.00	31.10	109.52	14.47
7	400.00	0.02	1.08	0.14
TOTAL	1838328.00		757.10	

AVERAGE EQUIVELANT SPHERICAL VOLUME= 13.94

DIVERSITY INDICES:

MARGALEF'S INDEX = 2.36

SHANNON-WEAVER INDEX = 3.66

Cont'd: SPLIT LAKE STN1 06 JUNE 87

********** SUMMARY **********

GROUP NUMBER	CELLS/L	% OF TOTAL	BIOMASS ug/m^3	% OF TOTAL
1	44384.00	1.98	321.28	38.30
2	273992.00	12.21	54.82	6.53
3	600.00	0.03	3.80	0.45
4	409488.00	18.25	45.62	5.44
5	91568.00	4.08	237.69	28.33
6	1424232.00	63.46	175.66	20.94
7	0.00	0.00	0.00	0.00
TOTAL	2244264.00		838.86	

AVERAGE EQUIVELANT SPHEREICAL VOLUME= 13.20

DIVERSITY INDICES:

MARGALEF'S INDEX = 2.67

SHANNON-WEAVER INDEX = 2.90

```
*  SPLIT    ST1 112      *
*                        *
*  06 JUL 87 (DAY 187)   *
**************************
```

```
# SPECIES=40
STRATA DEPTH=
STRATA VOL.=
FILE NAME = ST106JUL87
```

REC #	SPECIES	CELL VOLUME	CORR. FACT.	RAW COUNT	ESD	CELLS /LITER	BIOMASS ug/m ^3
	**********						
	GROUP 1						
	**********						
3	APHANOTHECE SP.	1150	7184	1	13.00	7184	8.26
4	APHANIZOMENON FLOS-AQUAE	3500	200	59	18.84	11800	41.30
5	APHANIZOMENON FLOS-AQUAE	31500	200	8	39.18	1600	50.40
6	ANABAENA PLANCTONICA	17500	200	19	32.21	3800	66.50
7	ANABAENA CIRCINALIS	9800	200	29	26.55	5800	56.84
8	ANABAENA SP.	6900	200	71	23.62	14200	97.98
	**********						
	GROUP 2						
	**********						
9	CHLAMYDOMONAS SPP.	100	7184	1	5.76	7184	0.72
10	GLOEOCOCCUS SCHROETERI	30	7184	8	3.86	57472	1.72
11	PEDIASTRUM DUPLEX	41600	200	5	42.99	1000	41.60
12	OOCYSTIS SUBMARINA V LAC.	60	7184	3	4.86	21552	1.29
13	CHODATELLA SP.	50	7184	1	4.57	7184	0.36
14	SCENEDESMUS QUADRICAUDA	110	7184	2	5.94	14368	1.58
15	MONORAPHIDIUM SETIFORME	100	7184	5	5.76	35920	3.59
16	MONORAPHIDIUM CONTORTUM	35	7184	14	4.06	100576	3.52
17	CRUCIGENIELLA SPP.	15	7184	4	3.06	28736	0.43
	**********						
	GROUP 3						
	**********						
18	EUGLENA ACUS	8500	200	1	25.32	200	1.70
19	TRACHELOMONAS HISPIDA	5250	200	2	21.56	400	2.10
	**********						
	GROUP 4						
	**********						
20	SMALL CHRYSOPHYCEAE	50	7184	35	4.57	251440	12.57
21	LARGE CHRYSOPHYCEAE	380	7184	2	8.99	14368	5.46
22	CHRYSOCHROMULINA PARVA	50	7184	7	4.57	50288	2.51
23	DINOBRYON BAVARICUM	300	7184	3	8.31	21552	6.47
24	CHRYSOCHROMULINA BRIV.LAU.	380	7184	1	8.99	7184	2.73
25	BICOECA AINIKKIAE	520	7184	1	9.98	7184	3.74
26	SALPINGOECA SP.	380	7184	3	8.99	21552	8.19
27	STELEXMONAS DICHOTOMS	110	7184	5	5.94	35920	3.95
	**********						
	GROUP 5						
	**********						
28	MELOSIRA ITALICA	29260	7184	1	38.23	7184	210.20
29	RHIZOSOLENIA ERIENSE	390	7184	1	9.06	7184	2.80
30	TABELLARIA FENESTRATA	2100	200	9	15.89	1800	3.78
31	SYNEDRA ACUS	130	200	46	6.29	9200	1.20
32	SYNEDRA ACUS	400	200	20	9.14	4000	1.60
33	SYNEDRA ULNA	2250	200	8	16.26	1600	3.60
34	ASTERIONELLA FORMOSA	130	200	206	6.29	41200	5.36
35	ASTERIONELLA FORMOSA	220	200	67	7.49	13400	2.95
36	STEPHANODISCUS ASTREAE	3600	200	8	19.02	1600	5.76
37	DIATOMA SP	100	200	22	5.76	4400	0.44
	**********						
	GROUP 6						
	**********						
38	RHODOMONAS MINUTA	80	7184	160	5.35	1149440	91.96
39	RHODOMONAS MINUTA	340	7184	30	8.66	215520	73.28
40	CRYPTOMONAS EROSA	2700	200	7	17.28	1400	3.78
41	CRYPTOMONAS MARSSONII	2250	200	2	16.26	400	0.90
42	KATABLEPHARIS OVALIS	100	7184	8	5.76	57472	5.75

SPLIT ST3

08 JUN 87 (DAY 159)

SPECIES=29
STRATA DEPTH=
STRATA VOL.=
FILE NAME = ST3C8JUN87

REC #	SPECIES	CELL VOLUME	CORR. FACT.	RAW COUNT	ESD	CELLS /LITER	BIOMASS mg/m^3
	GROUP 1						
3	APHANIZOMENON FLOS-AQUAE	3500	200	72	18.84	14400	50.40
	GROUP 2						
4	CHLAMYDOMONAS SPP.	80	7184	1	5.35	7184	0.57
5	SCENEDESMUS QUADRICAUDA	70	7184	2	5.11	14368	1.01
6	MONORAPHIDIUM SETIFORME	100	7184	1	5.76	7184	0.72
7	MONORAPHIDIUM CONTORTUM	35	7184	9	4.06	64656	2.26
8	BOTRYOCOCCUS BRAUNII	31000	200	1	38.93	200	6.20
	GROUP 3						
9	EUGLENA ACUS	7300	200	1	24.07	200	1.46
	GROUP 4						
10	SMALL CHRYSOPHYCEAE	50	7184	19	4.57	136496	6.82
11	CHRYSOCHROMULINA PARVA	50	7184	45	4.57	323280	16.16
12	KEPHYRION SP.	90	7184	1	5.56	7184	0.65
13	SALPINGOECA SP.	380	7184	2	8.99	14368	5.46
	GROUP 5						
14	MELOSIRA ITALICA	24800	7184	15	34.18	107760	2672.45
15	MELOSIRA SP.	1380	7184	4	13.81	28736	39.66
16	MELOSIRA SP.	33000	7184	1	39.80	7184	237.07
17	TABELLARIA FENESTRATA	2150	200	4	16.01	800	1.72
18	FRAGILARIA CROTONENSIS	130	200	25	6.29	5000	0.65
19	SYNEDRA ACUS	400	200	60	9.14	12000	4.80
20	SYNEDRA ULNA	2300	200	11	16.38	2200	5.06
21	ASTERIONELLA FORMOSA	130	200	217	6.29	43400	5.64
22	ASTERIONELLA FORMOSA	220	200	48	7.49	9600	2.11
23	STEPHANODISCUS ASTREAE	3650	200	3	19.10	600	2.19
24	DIATOMA SP	100	200	45	5.76	9000	0.90
	GROUP 6						
25	RHODOMONAS MINUTA	340	7184	9	8.66	64656	21.98
26	CRYPTOMONAS EROSA	2700	200	7	17.28	1400	3.78
27	CRYPTOMONAS MARSSONII	80	7184	8	5.35	57472	4.60
28	KATABLEPHARIS OVALIS	100	7184	9	5.76	64656	6.47
	GROUP 7						
29	GYMNODINIUM SP.	16250	200	2	31.43	400	6.50
30	PERIDINIUM INCONSPICUM	2450	200	5	16.73	1000	2.45
31	PERIDINIUM ACICULIFERRIM	9400	200	1	26.18	200	1.88

SUMMARY

GROUP NUMBER	CELLS/L	% OF TOTAL	BIOMASS mg/m^3	% OF TOTAL
1	14400.00	1.43	50.40	1.62
2	93592.00	9.31	10.76	0.35
3	200.00	0.02	1.46	0.05
4	481328.00	47.87	29.10	0.94
5	226280.00	22.50	2972.25	95.52
6	188184.00	18.71	36.83	1.18
7	1600.00	0.16	10.83	0.35
TOTAL	1005584.00		3111.62	

AVERAGE EQUIVELANT SPHEREICAL VOLUME= 14.26

DIVERSITY INDICES:
MARGALEF'S INDEX = 2.03
SHANNON-WEAVER INDEX = 3.38

CONT'D: SPLIT LAKE STN 2. 08 JUNE 87

SUMMARY

GROUP NUMBER	CELLS/L	% OF TOTAL	BIOMASS mg/m^3	% OF TOTAL
1	47104.00	2.87	26.06	3.36
2	215920.00	13.16	46.59	6.01
3	400.00	0.02	2.16	0.28
4	660928.00	40.29	50.93	6.57
5	121288.00	7.39	513.65	66.22
6	594288.00	36.23	130.29	16.80
7	400.00	0.02	5.96	0.77
TOTAL	1640328.00		775.62	

AVERAGE EQUIVELANT SPHEREICAL VOLUME= 13.31

DIVERSITY INDICES:

MARGALEF'S INDEX = 2.59
SHANNON-WEAVER INDEX = 3.46

```
**********************************
*  SPLIT    ST2                  *
*                                 *
*  08 JUN 87 (DAY 159)           *
**********************************
```

* SPECIES=38
STRATA DEPTH=
STRATA VOL.=
FILE NAME = ST208JUN87

REC #	SPECIES	CELL VOLUME	CORR. FACT.	RAW COUNT	RAW BED	CELLS /LITER	BIOMASS mg/m^3
	****						
	GROUP 1						
	****						
3	APHANIZOMENON FLOS-AQUAE	3500	200	16	18.84	3200	11.20
4	ANABAENA CIRCINALIS ..	5100	200	4	21.36	800	4.08
5	LYNGBYA SP.	250	7184	6	7.82	43104	10.78
	****						
	GROUP 2						
	****						
6	CHLAMYDOMONAS SPP.	60	7184	2	4.86	14368	0.86
7	CHLAMYDOMONAS SPP.	380	7184	6	8.99	43104	16.38
8	PEDIASTRUM DUPLEX	50950	200	1	46.00	200	10.19
9	OOCYSTIS SUBMARINA V LAC.	40	7184	3	4.24	21552	0.86
10	SCENEDESMUS SP.	250	7184	8	7.82	57472	14.37
11	MONORAPHIDIUM SETIFORME	90	7184	2	5.56	14368	1.29
12	MONORAPHIDIUM CONTORTUM	35	7184	9	4.06	64656	2.26
13	CLOSTERIUM SP.	1850	200	1	15.23	200	0.37
	****						
	GROUP 3						
	****						
14	TRACHELOMONAS VOLVOCINA	5375	200	1	21.60	200	1.08
15	TRACHELOMONAS HISPIDA	5500	200	1	21.90	200	1.10
	****						
	GROUP 4						
	****						
16	SMALL CHRYSOPHYCEAE	50	7184	29	4.57	208336	10.42
17	CHRYSOCHROMULINA PARVA	50	7184	55	4.57	395120	19.76
18	DINOBRYON SERTULARIA	230	7184	1	7.60	7184	1.65
19	CHRYSOCHROMULINA BRIV.LAU.	380	7184	3	8.99	21552	8.19
20	SALPINGOECA SP.	380	7184	4	8.99	28736	10.92
	****						
	GROUP 5						
	****						
21	MELOSIRA ITALICA	29200	7184	2	38.21	14368	419.55
22	MELOSIRA SP.	1500	7184	4	14.20	28736	43.10
23	CYCLOTELLA SPP.	900	7184	1	11.98	7184	6.47
24	CYCLOTELLA SPP.	2525	200	10	16.89	2000	5.05
25	TABELLARIA FENESTRATA	2150	200	24	16.01	4800	10.32
26	FRAGILARIA CROTONENSIS	115	200	20	6.03	4000	0.46
27	SYNEDRA ACUS	140	200	15	6.44	3000	0.42
28	SYNEDRA ACUS	400	200	10	9.14	2000	0.80
29	SYNEDRA ULNA	3250	200	6	18.38	1200	3.90
30	ASTERIONELLA FORMOSA	130	200	165	6.29	33000	4.29
31	ASTERIONELLA FORMOSA	225	200	42	7.55	8400	1.89
32	STEPHANODISCUS ASTREAE	3600	200	23	19.02	4600	16.56
33	DIATOMA SP	105	200	40	5.85	8000	0.84
	****						
	GROUP 6						
	****						
34	RHODOMONAS MINUTA	80	7184	35	5.35	251440	20.12
35	RHODOMONAS MINUTA	300	7184	43	8.31	308912	92.67
36	CRYPTOMONAS EROSA	2400	200	23	16.61	4600	11.04
37	CRYPTOMONAS MARSSONII	2000	200	1	15.63	200	0.40
38	CRYPTOMONAS ROSTRATIFORM	7960	200	2	24.77	400	3.18
39	KATABLEPHARIS OVALIS	100	7184	4	5.76	28736	2.87
	****						
	GROUP 7						
	****						
40	GYMNODINIUM SP.	14900	200	2	30.53	400	5.96

CONT'D: SPLIT LAKE 87/1 09 JUN 87

SUMMARY

GROUP NUMBER	CELLS/L	% OF TOTAL	BIOMASS mg/m^3	% OF TOTAL
1	33936.00	3.04	43.68	1.60
2	180100.00	16.13	28.20	1.03
3	200.00	0.02	1.08	0.04
4	460176.00	41.19	36.50	1.34
5	144272.00	12.91	2553.05	93.48
6	297544.00	26.63	57.93	2.12
7	1000.00	0.09	10.68	0.39
TOTAL	1117228.00		2731.13	

AVERAGE EQUIVELANT SPHERICAL VOLUME= 17.51

DIVERSITY INDICES:
MARGALEF'S INDEX = 2.51
SHANNON-WEAVER INDEX = 3.73

SPLIT ST1

08 JUN 87 (DAY 159)

SPECIES=36
STRATA DEPTH=
STRATA VOL.=
FILE NAME = ST108JUN87

REC #	SPECIES	CELL VOLUME	CORR. FACT.	RAW COUNT	ESD	CELLS /LITER	BIOMASS ug/L C
	GROUP 1						
3	APHANIZOMENON FLOS-AQUAE	3500	200	23	18.84	4600	16.10
4	APHANIZOMENON FLOS-AQUAE	42000	200	1	42.13	200	8.40
5	ANABAENA SP.	26400	200	2	36.94	400	10.56
6	LYNGBYA SP.	300	7184	4	8.31	28736	8.62
	GROUP 2						
7	CHLAMYDOMONAS SPP.	150	7184	1	6.59	7184	1.08
8	SCENEDESMUS BREVISPINA	100	7184	4	5.76	28736	2.87
9	DICTYOSPHAERIUM SIMPLEX	15	7184	12	3.06	86206	1.29
10	MONORAPHIDIUM SETIFORME	100	7184	4	5.76	28736	2.87
11	MONORAPHIDIUM CONTORTUM	35	7184	4	4.06	28736	1.01
12	MOUGEOTIA SP.	31850	200	3	39.31	600	19.08
	GROUP 3						
13	TRACHELOMONAS HISPIDA	5400	200	1	21.77	200	1.08
	GROUP 4						
14	SMALL CHRYSOPHYCEAE	50	7184	23	4.57	165232	8.26
15	LARGE CHRYSOPHYCEAE	380	7184	2	8.99	14368	5.46
16	CHRYSOCHROMULINA PARVA	50	7184	36	4.57	258624	12.93
17	MALLOMONAS CAUDATA	4150	200	2	19.94	400	1.66
18	CHRYSOCHROMULINA BRIV.LAU.	380	7184	3	8.99	21552	8.19
	GROUP 5						
19	MELOSIRA GRANULATA	66100	7184	2	50.17	14368	949.72
20	MELOSIRA ITALICA	17500	7184	3	32.21	21552	377.16
21	MELOSIRA SP.	1130	7184	1	12.92	7184	8.12
22	MELOSIRA SP.	81400	7184	2	53.77	14368	1169.56
23	TABELLARIA FENESTRATA	2250	200	23	16.26	4600	10.35
24	FRAGILARIA CONSTRUENS	24400	200	2	35.99	400	9.76
25	SYNEDRA ACUS	400	200	45	9.14	9000	3.60
26	SYNEDRA ULNA	2200	200	3	16.14	600	1.32
27	ASTERIONELLA FORMOSA	140	200	170	6.44	34000	4.76
28	ASTERIONELLA FORMOSA	220	200	120	7.49	24000	5.28
29	STEPHANODISCUS ASTREAE	3600	200	15	19.02	3000	10.80
30	DIATOMA SP	100	200	55	5.76	11000	1.10
31	GYRODIGMA SP	7600	200	1	24.39	200	1.52
	GROUP 6						
32	RHODOMONAS MINUTA	80	7184	19	5.35	136496	10.92
33	RHODOMONAS MINUTA	340	7184	14	8.64	100576	34.20
34	CRYPTOMONAS EROSA	2375	200	14	16.55	2800	6.65
35	CRYPTOMONAS MARSSONII	2100	200	1	15.89	200	0.42
36	KATABLEPHARIS OVALIS	100	7184	8	5.76	57472	5.75
	GROUP 7						
37	GYMNODINIUM SP.	16200	200	3	31.39	600	9.72
38	PERIDINIUM INCONSPICUM	2400	200	2	16.61	400	0.96

CON'D: SPLIT LAKE STN3 14 MAY 87

SUMMARY

GROUP NUMBER	CELLS/L	% OF TOTAL	BIOMASS mg/m^3	% OF TOTAL
1	12584.00	0.86	20.77	0.47
2	201952.00	13.88	15.14	0.35
3	600.00	0.04	4.57	0.10
4	423856.00	29.13	51.22	1.17
5	190896.00	13.12	3990.77	91.22
6	618240.00	42.49	181.95	4.15
7	7000.00	0.48	111.18	2.54
TOTAL	1455128.00		4381.60	

AVERAGE EQUIVELANT SPHEREICAL VOLUME= 14.28

DIVERSITY INDICES:

MARGALEF'S INDEX = 2.47

SHANNON-WEAVER INDEX = 3.54

SPLIT ST3
14 MAY 87 (DAY 134)

SPECIES=36
STRATA DEPTH=
STRATA VOL.=
FILE NAME = ST314MAY87

REC #	SPECIES	CELL VOLUME	CORR. FACT.	RAW COUNT	RAW ESD	CELLS /LITER	BIOMASS ug.m^3
	GROUP 1						
3	APHANIZOMENON FLOS-AQUAE	3500	200	27	18.84	5400	18.90
4	LYNGBYA SP.	260	7184	1	7.92	7184	1.87
	GROUP 2						
5	CHLAMYDOMONAS SPP.	100	7184	2	5.76	14368	1.44
6	CHLOROCONIUM MAXIMUM	5900	200	4	22.42	800	4.72
7	SCENEDESMUS BREVISPINA	100	7184	6	5.76	43104	4.31
8	DICTYOSPHAERIUM SIMPLEX	15	7184	8	3.06	57472	0.86
9	MONORAPHIDIUM SETIFORME	90	7184	3	5.56	21552	1.94
10	MONORAPHIDIUM CONTORTUM	40	7184	5	4.24	35920	1.44
11	CRUCIGENIELLA SPP.	10	7184	4	3.06	28736	0.43
	GROUP 3						
12	EUGLENA ACUS	12300	200	1	28.64	200	2.46
13	TRACHELOMONAS VOLVOCINA	5275	200	2	21.60	400	2.11
	GROUP 4						
14	SMALL CHRYSOPHYCEAE	50	7184	33	4.57	237072	11.85
15	CHRYSOCHROMULINA PARVA	50	7184	8	4.57	57472	2.87
16	DINOBRYON SERTULARIA	440	7184	8	9.44	57472	25.29
17	CHRYSOCHROMULINA BRIV.LAU.	380	7184	2	8.99	14368	5.46
18	STELEXMONAS DICHOTOMS	100	7184	8	5.76	57472	5.75
	GROUP 5						
19	MELOSIRA ITALICA	29700	7184	16	38.42	114944	3413.84
20	MELOSIRA SP.	1350	7184	2	13.71	14368	19.40
21	MELOSIRA SP.	76000	7184	1	52.55	7184	545.98
22	TABELLARIA FENESTRATA	2190	200	1	16.11	200	0.44
23	SYNEDRA ACUS	140	200	7	6.44	1400	0.20
24	SYNEDRA ACUS	400	200	64	9.14	12800	5.12
25	SYNEDRA ULNA	2300	200	1	16.38	200	0.46
26	ASTERIONELLA FORMOSA	150	200	97	6.59	19400	2.91
27	ASTERIONELLA FORMOSA	220	200	18	7.49	3600	0.79
28	STEPHANODISCUS ASTREAE	3600	200	4	19.02	800	2.88
29	DIATOMA SP	100	200	78	5.76	15600	1.56
30	GYROZIGMA SP	8000	200	2	24.81	400	3.20
	GROUP 6						
31	RHODOMONAS MINUTA	80	7184	20	5.35	143680	11.49
32	RHODOMONAS MINUTA	340	7184	62	8.64	445408	151.44
33	CRYPTOMONAS EROSA	2350	200	34	16.50	6800	15.98
34	CRYPTOMONAS MARSSONII	2180	200	4	16.09	800	1.74
35	KATABLEPHARIS OVALIS	60	7184	3	4.86	21552	1.29
	GROUP 7						
36	GYMNODINIUM SP.	17600	200	9	32.27	1800	31.68
37	PERIDINIUM INCONSPICUM	3350	200	10	18.56	2000	6.70
38	PERIDINIUM ACICULIFERRIM	22750	200	16	35.16	3200	72.80

CONT'D: SPLIT LAKE STN 2 13 MAY 87

********** SUMMARY **********

GROUP NUMBER	CELLS/L	% OF TOTAL	BIOMASS mg/m^3	% OF TOTAL
1	2200.00	0.11	11.21	0.65
2	223304.00	11.49	70.17	4.07
3	400.00	0.02	2.86	0.17
4	704032.00	36.24	84.34	4.90
5	179104.00	9.22	1202.76	69.81
6	825976.00	42.51	215.15	12.49
7	7800.00	0.40	136.38	7.92
TOTAL	1942816.00		1722.86	

****

AVERAGE EQUIVELANT SPHEREICAL VOLUME= 15.36

DIVERSITY INDICES:

MARGALEF'S INDEX = 2.62

SHANNON-WEAVER INDEX = 3.62

SPLIT ST2

13 MAY 87 (DAY 133)

SPECIES=39
STRATA DEPTH=
STRATA VOL.=
FILE NAME = ST213MAY87

REC #	SPECIES	CELL VOLUME	CORR. FACT.	RAW COUNT	ESD	CELLS /LITER	BIOMASS mg/m^3
	GROUP 1						
3	APHANIZOMENON FLOS-AQUAE	3500	200	6	18.84	1200	4.20
4	ANABAENA PLANCTONICA	14650	200	1	30.36	200	2.93
5	ANABAENA CIRCINALIS	5100	200	4	21.34	800	4.08
	GROUP 2						
6	PEDIASTRUM DUPLEX	96900	200	3	56.99	600	58.14
7	SCENEDESMUS SP.	135	7184	8	6.36	57472	7.76
8	DICTYOSPHAERIUM SIMPLEX	15	7184	16	3.06	114944	1.72
9	MONORAPHIDIUM SETIFORME	90	7184	2	5.56	14368	1.29
10	MONORAPHIDIUM CONTORTUM	35	7184	5	4.06	35920	1.26
	GROUP 3						
11	EUGLENA ACUS	9000	200	1	25.81	200	1.80
12	TRACHELOMONAS VOLVOCINA	5275	200	1	21.60	200	1.06
	GROUP 4						
13	SMALL CHRYSOPHYCEAE	50	7184	27	4.57	193968	9.70
14	LARGE CHRYSOPHYCEAE	380	7184	9	8.99	64656	24.57
15	CHRYSOCHROMULINA PARVA	50	7184	41	4.57	294544	14.73
16	SYNURA SPAGNICOLA	100	7184	6	5.76	43104	4.31
17	DINOBRYON SERTULARIA	370	7184	7	8.91	50288	18.61
18	CHRYSOIKOS SKUJA	50	7184	1	4.57	7184	0.36
19	CHRYSOCHROMULINA BRIV.LAU.	380	7184	2	8.99	14368	5.46
20	BICOECA LACUSTRIS	520	7184	1	9.98	7184	3.74
21	STELEXMONAS DICHOTOMS	100	7184	4	5.76	28736	2.87
	GROUP 5						
22	MELOSIRA GRANULATA	26380	7184	2	36.93	14368	379.03
23	MELOSIRA ITALICA	25100	7184	4	36.33	28736	721.27
24	TABELLARIA FENESTRATA	2100	200	5	15.89	1000	2.10
25	FRAGILARIA CROTONENSIS	140	200	60	6.44	12000	1.68
26	SYNEDRA ACUS	140	200	5	6.44	1000	0.14
27	SYNEDRA ACUS	380	200	41	8.99	8200	3.12
28	SYNEDRA ULNA	2300	200	2	16.33	400	0.92
29	ASTERIONELLA FORMOSA	160	200	296	6.74	59200	9.47
30	ASTERIONELLA FORMOSA	220	200	77	7.49	15400	3.39
31	STEPHANODISCUS ASTREAE	24400	200	16	35.99	3200	78.08
32	DIATOMA SP	100	200	178	5.76	35600	3.56
	GROUP 6						
33	RHODOMONAS MINUTA	80	7184	39	5.35	280176	22.41
34	RHODOMONAS MINUTA	340	7184	67	8.66	481328	163.65
35	CRYPTOMONAS EROSA	2375	200	21	16.55	4200	9.98
36	CRYPTOMONAS MARSSONII	2200	200	2	16.14	400	0.88
37	CRYPTOMONAS ROSTRATIFORM	5200	200	12	21.49	2400	12.48
38	KATABLEPHARIS OVALIS	100	7184	8	5.76	57472	5.75
	GROUP 7						
39	GYMNODINIUM SP.	16200	200	21	31.39	4200	68.04
40	PERIDINIUM INCONSPICUM	3350	200	4	18.56	800	2.68
41	PERIDINIUM ACICULIFERRIM	23450	200	14	35.51	2800	65.66

```
$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$
$  SPLIT     ST1                 $
$                                $
$  13 MAY 87 (DAY 133)           $
$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$
```

SPECIES=30
STRATA DEPTH=
STRATA VOL.=
FILE NAME = ST113MAY87

REC #	SPECIES	CELL VOLUME	CORR. FACT.	RAW COUNT	ESD	CELLS /LITER	BIOMASS mg/m^3
	GROUP 1						
3	APHANIZOMENON FLOS-AQUAE	3560	200	9	18.94	1800	6.41
	GROUP 2						
4	CHLAMYDOMONAS SPP.	175	7184	1	6.94	7184	1.26
5	MONORAPHIDIUM SETIFORME	110	7184	4	5.94	28736	3.16
6	MONORAPHIDIUM CONTORTUM	35	7184	1	4.06	7184	0.25
	GROUP 3						
7	TRACHELOMONAS VOLVOCINA	3725	200	1	19.23	200	0.75
	GROUP 4						
8	SMALL CHRYSOPHYCEAE	50	7184	14	4.57	100576	5.03
9	LARGE CHRYSOPHYCEAE	380	7184	2	8.99	14368	5.46
10	CHRYSOCHROMULINA PARVA	50	7184	21	4.57	150864	7.54
11	DINOBRYON SERTULARIA	400	7184	8	9.14	57472	22.99
12	STELEXMONAS DICHOTOMS	110	7184	15	5.94	107760	11.85
	GROUP 5						
13	MELOSIRA GRANULATA	32900	7184	2	39.76	14368	472.71
14	MELOSIRA ITALICA	33700	7184	5	40.08	35920	1210.50
15	MELOSIRA SP.	82400	7184	1	53.99	7184	591.96
16	TABELLARIA FENESTRATA	2200	200	4	16.14	800	1.76
17	FRAGILARIA CROTONENSIS	14900	200	1	30.53	200	2.98
18	SYNEDRA ACUS	130	200	38	6.29	7600	0.99
19	SYNEDRA ACUS	220	200	25	7.49	5000	1.10
20	SYNEDRA ULNA	2325	200	4	16.44	800	1.86
21	ASTERIONELLA FORMOSA	150	200	157	6.39	31400	4.71
22	ASTERIONELLA FORMOSA	220	200	21	7.49	4200	0.92
23	STEPHANODISCUS ASTREAE	24400	200	4	35.99	800	19.52
24	DIATOMA SP	100	200	97	5.76	19400	1.94
	GROUP 6						
25	RHODOMONAS MINUTA	80	7184	43	5.35	308912	24.71
26	RHODOMONAS MINUTA	340	7184	54	8.64	387936	131.90
27	CRYPTOMONAS EROSA	2325	200	24	16.44	4800	11.16
28	CRYPTOMONAS MARSSONII	2995	200	1	17.88	200	0.60
29	CRYPTOMONAS ROSTRATIFORM	5600	200	1	22.03	200	1.12
30	KATABLEPHARIS OVALIS	150	7184	5	6.59	35920	5.39
	GROUP 7						
31	GYMNODINIUM SP.	14950	200	11	30.56	2200	32.89
32	PERIDINIUM INCONSPICUM	2200	200	2	18.28	400	1.28

$$$$$$$$$$$$$$ SUMMARY $$$$$$$$$$$$$$

GROUP NUMBER	CELLS/L	% OF TOTAL	BIOMASS mg/m^3	% OF TOTAL
1	1800.00	0.13	6.41	0.25
2	43104.00	3.21	4.67	0.18
3	200.00	0.01	0.75	0.03
4	431040.00	32.06	52.87	2.05
5	127672.00	9.50	2310.95	89.41
6	737968.00	54.89	174.88	6.77
7	2600.00	0.19	34.17	1.32
TOTAL	1344384.00		2584.70	

AVERAGE EQUIVELANT SPHEREICAL VOLUME= 16.02

DIVERSITY INDICES:
MARGALEF'S INDEX = 2.06
SHANNON-WEAVER INDEX = 3.18

APPENDIX B5. Phytoplankton data from Stephens Lake, 1987.

Group	
1	Cyanophyceae - blue greens
2	Chlorophyceae - greens
3	Euglenophyceae - euglenophytes
4	Chrysophyceae - chrysophytes
5	Bacillariophyceae - diatoms
6	Cryptophyceae - cryptophytes
7	Peridineae - dinoflagellates

****
* STEPHENS ST1 *
*
* 08 JUN 87 (DAY 159) *
****

* SPECIES=28
STRATA DEPTH=
STRATA VOL.=
FILE NAME = ST1DEJUN87

REC #	SPECIES	CELL VOLUME	CORR. FACT.	RAW COUNT	ESD	CELLS /LITER	BIOMASS mg/m^3
	********** GROUP 1 **********						
3	ANABAENA PLANCTONICA	9350	200	1	26.14	200	1.87
4	LYNGBYA SP.	300	7184	2	8.31	14368	4.31
	********** GROUP 2 **********						
5	CHLAMYDOMONAS SPP.	110	7184	1	5.94	7184	0.79
6	CHLAMYDOMONAS SPP.	520	7184	5	9.98	35920	18.68
7	CHODATELLA SP.	80	7184	3	5.35	21552	1.72
8	MONORAPHIDIUM SETIFORME	100	7184	2	5.76	14368	1.44
9	MONORAPHIDIUM CONTORTUM	30	7184	48	3.86	344832	10.34
10	MONORAPHIDIUM MINUTUM	10	7184	1	2.67	7184	0.07
11	CLOSTERIUM SP.	1425	200	4	13.96	800	1.14
	********** GROUP 4 **********						
12	SMALL CHRYSOPHYCEAE	50	7184	27	4.57	193968	9.70
13	CHRYSOCHROMULINA PARVA	150	7184	47	4.57	337648	16.88
14	DINOBRYON SERTULARIA	380	7184	3	8.99	21552	8.19
15	OCHROMONAS SP.	230	7184	1	7.60	7184	1.65
16	CHRYSOCHROMULINA BRIV.LAU.	520	7184	8	9.98	57472	29.89
17	SALPINGOECA SP.	380	7184	4	8.99	28736	10.92
	********** GROUP 5 **********						
18	MELOSIRA GRANULATA	31100	7184	3	39.02	21552	670.27
19	MELOSIRA ITALICA	29260	7184	1	38.23	7184	210.20
20	SYNEDRA ACUS	400	200	68	9.14	13600	5.44
21	SYNEDRA ULNA	2300	200	3	16.38	600	1.38
22	ASTERIONELLA FORMOSA	130	200	152	6.29	30400	3.95
23	ASTERIONELLA FORMOSA	220	200	15	7.49	3000	0.66
24	STEPHANODISCUS ASTREAE	3600	200	11	19.02	2200	7.92
	********** GROUP 6 **********						
25	RHODOMONAS MINUTA	80	7184	78	5.35	201152	16.09
26	RHODOMONAS MINUTA	340	7184	2	8.65	14368	4.87
27	CRYPTOMONAS EROSA	2950	200	4	17.79	800	2.36
28	CRYPTOMONAS MARSSONII	2375	200	2	16.55	400	0.95
29	KATABLEPHARIS OVALIS	100	7184	3	5.76	21552	2.16
	********** GROUP 7 **********						
30	PERIDINIUM INCONSPICUM	2700	200	1	17.26	200	0.54

********** SUMMARY **********

GROUP NUMBER	CELLS/L	% OF TOTAL	BIOMASS mg/m^3	% OF TOTAL
1	14368.00	1.02	6.18	0.59
2	431840.00	30.63	34.19	3.27
3	0.00	0.00	0.00	0.00
4	646560.00	45.86	77.23	7.39
5	78536.00	5.57	399.82	38.16
6	238272.00	16.90	26.44	2.53
7	200.00	0.01	0.54	0.05
TOTAL	1409976.00		1044.40	

****

AVERAGE EQUIVELANT SPHEREICAL VOLUME= 11.91

DIVERSITY INDICES:

STEPHENS STP

08 JUN 87 (DAY 159)

SPECIES=33
STRATA DEPTH=
STRATA VOL.=
FILE NAME = ST208JUN87

REC #	SPECIES	CELL VOLUME	CORR. FACT.	RAW COUNT	ESD	CELLS /LITER	BIOMASS mg/m^3
	GROUP 1						
3	GOMPHOSPHAERIA LACUSTRIS	5250	200	1	21.56	200	1.05
4	APHANIZOMENON FLOS-AQUAE	3500	200	9	18.84	1800	6.30
5	ANABAENA CIRCINALIS	8825	200	2	25.64	400	3.53
6	LYNGBYA SP.	300	7184	7	8.31	50288	15.09
	GROUP 2						
7	CHLAMYDOMONAS SPP.	15	7184	2	3.06	14368	0.22
8	CHLAMYDOMONAS SPP.	520	7184	1	9.98	7184	3.74
9	SCENEDESMUS SP.	130	7184	4	6.29	28736	3.74
10	MONORAPHIDIUM CONTORTUM	30	7184	11	3.86	79024	2.37
11	CRUCIGENIELLA SPP.	30	7184	4	3.86	28736	0.86
	GROUP 3						
12	TRACHELOMONAS HISPIDA	5250	200	1	21.56	200	1.05
	GROUP 4						
13	SMALL CHRYSOPHYCEAE	50	7184	29	4.57	208336	10.42
14	LARGE CHRYSOPHYCEAE	390	7184	5	8.99	35920	13.65
15	CHRYSOCHROMULINA PARVA	50	7184	12	4.57	86208	4.31
16	CHRYSOCHROMULINA BRIV.LAU.	380	7184	5	8.99	35920	13.65
	GROUP 5						
17	MELOSIRA ITALICA	26700	7184	1	37.06	7184	191.81
18	MELOSIRA SP.	1950	7184	3	15.20	21552	39.97
19	MELOSIRA SP.	28250	7184	1	37.79	7184	202.95
20	CYCLOTELLA SPP.	60	7184	1	4.86	7184	0.43
21	TABELLARIA FENESTRATA	2200	200	3	16.14	600	1.32
22	SYNEDRA ACUS	150	200	11	6.59	2200	0.33
23	SYNEDRA ACUS	400	200	30	9.14	6000	2.40
24	SYNEDRA ULNA	2300	200	6	16.38	1800	2.76
25	ASTERIONELLA FORMOSA	790	200	300	6.44	41200	5.77
26	ASTERIONELLA FORMOSA	230	200	36	7.60	7200	1.66
27	STEPHANODISCUS ASTREAE	3600	200	19	19.02	3800	13.68
28	DIATOMA SP	670	200	70	10.86	14000	9.38
29	GYROSIGMA SP	7650	200	1	24.45	200	1.53
	GROUP 6						
30	RHODOMONAS MINUTA	80	7184	82	5.35	589088	47.13
31	RHODOMONAS MINUTA	340	7184	21	8.66	150864	51.29
32	CRYPTOMONAS EROSA	2900	200	8	17.69	1600	4.64
33	CRYPTOMONAS MARSSONII	2375	200	11	16.55	2200	5.22
34	CRYPTOMONAS ROSTRATIFORM	7225	200	1	23.99	200	1.45
35	KATABLEPHARIS OVALIS	100	7184	9	5.76	64656	6.47

SUMMARY

GROUP NUMBER	CELLS/L	% OF TOTAL	BIOMASS mg/m^3	% OF TOTAL
1	52688.00	3.50	25.97	3.88
2	158048.00	10.50	10.93	1.63
3	200.00	0.01	1.05	0.16
4	366384.00	24.34	42.03	6.27
5	119504.00	7.94	470.89	70.72
6	808608.00	53.71	116.20	17.34
7	0.00	0.00	0.00	0.00
TOTAL	1505432.00		670.05	

AVERAGE EQUIVELANT SPHEREICAL VOLUME= 13.32

DIVERSITY INDICES:
MARGALEF'S INDEX = 2.25
SHANNON-WEAVER INDEX = 3.22

****
* STEPHENS STP *
*
* 08 JUN 87 (DAY 159) *
****

SPECIES=30
STRATA DEPTH=
STRATA VOL.=
FILE NAME = ST30608.87

REC #	SPECIES	CELL VOLUME	CORR. FACT.	RAW COUNT	ESD	CELLS /LITER	BIOMASS mg/m^3
	********** GROUP 1 **********						
3	GOMPHOSPHAERIA LACUSTRIS	12500	200	1	28.75	200	2.50
4	APHANIZOMENON FLOS-AQUAE	3500	200	12	18.84	2400	8.40
5	ANABAENA PLANCTONICA	21375	200	1	34.43	200	4.28
6	ANABAENA CIRCINALIS	9000	200	1	25.81	200	1.80
7	LYNGBYA SP.	250	7184	1	7.82	7184	1.80
	********** GROUP 2 **********						
8	CHLAMYDOMONAS SPP.	80	7184	1	5.35	7184	0.57
9	PEDIASTRUM DUPLEX	77900	200	1	52.99	200	15.58
10	MONORAPHIDIUM CONTORTUM	30	7184	8	3.86	57472	1.72
11	CLOSTERIUM SP.	1400	200	1	13.88	200	0.28
12	TETRAEDRON CAUDATA	15	7184	1	3.06	7184	0.11
	********** GROUP 4 **********						
13	SMALL CHRYSOPHYCEAE	50	7184	14	4.57	100576	5.03
14	CHRYSOCHROMULINA PARVA	50	7184	17	4.57	122128	6.11
15	DINOBRYON SOCIALE	240	7184	7	7.71	50288	12.07
	********** GROUP 5 **********						
16	MELOSIRA GRANULATA	41900	7184	3	43.09	21552	903.03
17	MELOSIRA ITALICA	31800	7184	12	39.31	86208	2741.41
18	MELOSIRA SP.	1130	7184	5	12.51	35920	40.59
19	MELOSIRA SP.	99800	7184	1	57.55	7184	716.96
20	SYNEDRA ACUS	150	200	11	6.59	2200	0.33
21	SYNEDRA ACUS	400	200	30	9.14	6000	2.40
22	SYNEDRA ULNA	1625	200	3	14.59	600	0.98
23	ASTERIONELLA FORMOSA	140	200	123	6.44	24600	3.58
24	ASTERIONELLA FORMOSA	220	200	17	7.49	3400	0.75
25	STEPHANODISCUS ASTREAE	3600	200	15	19.02	3000	10.80
26	DIATOMA SP	670	200	61	10.86	12200	8.17
	********** GROUP 6 **********						
27	RHODOMONAS MINUTA	80	7184	88	5.35	632192	50.53
28	RHODOMONAS MINUTA	340	7184	31	8.66	222704	75.72
29	CRYPTOMONAS EROSA	2925	200	10	17.74	2000	5.85
30	CRYPTOMONAS MARSSONII	2700	200	2	17.28	400	1.08
31	CRYPTOMONAS ROSTRATIFORM	7225	200	1	23.99	200	1.45
32	KATABLEPHARIS OVALIS	100	7184	7	5.76	50288	5.03

********** SUMMARY **********

GROUP NUMBER	CELLS/L	% OF TOTAL	BIOMASS mg/m^3	% OF TOTAL
1	10184.00	0.69	18.77	0.41
2	72240.00	4.92	18.27	0.39
3	0.00	0.00	0.00	0.00
4	272992.00	18.61	23.20	0.50
5	203664.00	13.90	4429.01	95.68
6	907784.00	61.89	139.70	3.02
7	0.00	0.00	0.00	0.00
TOTAL	1467064.00		4628.95	

****

AVERAGE EQUIVELANT SPHEREICAL VOLUME= 17.25

DIVERSITY INDICES:
MARGALEF'S INDEX = 2.04
SHANNON-WEAVER INDEX = 2.92

```
**************************
* STEPHENS    ST1        *
*                        *
* 06 JUL 87 (DAY 187)    *
**************************
```

SPECIES=33
STRATA DEPTH=
STRATA VOL.=
FILE NAME = ST1:06JUL87

REC #	SPECIES	CELL VOLUME	CORR. FACT.	RAW COUNT	ESD	CELLS /LITER	BIOMASS mg/m^3
	GROUP 1						
3	APHANIZOMENON FLOS-AQUAE	1750	200	21	14.95	4200	7.35
4	ANABAENA PLANCTONICA	16690	200	1	31.71	200	3.34
5	ANABAENA CIRCINALIS	7050	200	6	23.79	1200	8.46
6	LYNGBYA SP.	220	7184	3	7.49	21552	4.74
	GROUP 2						
7	CHLAMYDOMONAS SPP.	110	7184	2	5.94	14368	1.58
8	CHLAMYDOMONAS SPP.	395	7184	2	9.10	14368	5.68
9	MONORAPHIDIUM SETIFORME	130	7184	4	6.29	28736	3.74
10	MONORAPHIDIUM CONTORTUM	30	7184	39	3.81	280176	8.41
11	CRUCIGENIELLA SPP.	15	7184	4	3.06	28736	0.43
12	ELAKATOTHRIX GELATINOSA	30	7184	2	3.86	14368	0.43
13	BOTRYOCOCCUS BRAUNII	24400	200	1	35.99	200	4.88
	GROUP 3						
14	EUGLENA ACUS	8750	200	2	25.57	400	3.50
	GROUP 4						
15	SMALL CHRYSOPHYCEAE	50	7184	38	4.57	272992	13.65
16	LARGE CHRYSOPHYCEAE	380	7184	13	8.99	93392	35.49
17	CHRYSOCHROMULINA PARVA	50	7184	50	4.57	359200	17.96
18	SPINIFIRMONAS TRIORALIS	520	7184	1	9.99	7184	3.74
19	DINOBRYON SOCIALE	240	7184	15	7.71	107760	25.86
20	CHRYSOCHROMULINA BRIV.LAU.	380	7184	15	8.59	107760	40.95
21	SALPINGOECA SP.	380	7184	9	8.99	64656	24.57
22	DINOBRYON TUBAEFORME (SIL)	380	7184	1	8.99	7184	2.73
23	STELEXMONAS DICHOTOMS	110	7184	4	5.94	28736	3.16
	GROUP 5						
24	CYCLOTELLA SPP.	75	7184	4	4.06	28736	1.01
25	[illegible]	800	7184	2	11.92	14368	11.49
26	SYNEDRA ACUS	15380	200	1	30.65	200	92.44
27	ASTERIONELLA FORMOSA	150	200	13	6.59	2600	0.39
28	ASTERIONELLA FORMOSA	220	200	2	7.49	400	0.09
29	STEPHANODISCUS ASTREAE	3600	200	1	19.02	200	0.72
	GROUP 6						
30	RHODOMONAS MINUTA	100	7184	11	5.76	79024	7.90
31	RHODOMONAS MINUTA	340	7184	2	8.66	14368	4.89
32	CRYPTOMONAS EROSA	2700	200	6	17.28	1200	3.24
33	KATABLEPHARIS OVALIS	100	7184	6	5.76	43104	4.31
	GROUP 7						
34	GYMNODINIUM SP.	2900	200	3	17.69	600	1.74
35	PERIDINIUM INCONSPICUM	3600	200	14	19.02	2800	10.08

********** SUMMARY **********

GROUP NUMBER	CELLS/L	% OF TOTAL	BIOMASS mg/m^3	% OF TOTAL
1	27152.00	1.65	23.89	7.35%
2	380952.00	23.11	25.14	7.74%
3	400.00	0.02	3.50	1.08%
4	1048864.00	63.62	168.11	51.74
5	50104.00	3.04	72.14	22.20%
6	137696.00	8.35	20.34	6.26%
7	3400.00	0.21	11.82	3.64%
TOTAL	1648568.00		324.93	

AVERAGE EQUIVELANT SPHEREICAL VOLUME= 11.74

DIVERSITY INDICES:
MARGALEF'S INDEX = 2.24

```
STEPHENS    STI 129
06 JUL 87 (DAY 187)
```

* SPECIES=40
STRATA DEPTH=
STRATA VOL.=
FILE NAME = STI06JUL87

REC #	SPECIES	CELL VOLUME	CORR. FACT.	RAW COUNT	ESD	CELLS /LITER	BIOMASS mg / L
	*********						
	GROUP 1						
	*********						
3	GOMPHOSPHAERIA LACUSTRIS	24400	200	1	35.99	200	4.88
4	APHANIZOMENON FLOS-AQUAE	3000	200	32	17.85	6400	19.20
5	ANABAENA PLANCTONICA	16250	200	17	31.42	3400	55.25
6	ANABAENA CIRCINALIS	7050	200	23	23.79	4600	32.43
7	LYNGBYA SP.	250	7184	1	8.74	7184	2.51
	*********						
	GROUP 2						
	*********						
8	CHLAMYDOMONAS SPP.	520	7184	1	9.98	7184	3.74
9	PEDIASTRUM DUPLEX	77950	200	3	52.00	600	46.77
10	PAULSCHULZIA PSEUDOVOLVOX	100	7184	6	5.76	43104	4.31
11	DICTYOSPHAERIUM SIMPLEX	6	7184	4	2.22	28736	0.17
12	MONORAPHIDIUM SETIFORME	100	7184	16	5.76	114944	11.49
13	MONORAPHIDIUM CONTORTUM	35	7184	8	4.06	57472	2.01
14	MONORAPHIDIUM MINUTUM	10	7184	11	2.67	79024	0.79
15	SPONDYLOSIUM PLANUM	100	7184	2	5.76	14368	1.44
16	BOTRYOCOCCUS BRAUNII	36000	200	2	40.97	400	14.40
17	COLLODICTYON SP.	800	7184	3	11.52	21552	17.24
	*********						
	GROUP 3						
	*********						
18	EUGLENA ACUS	8750	200	3	25.57	600	5.25
	*********						
	GROUP 4						
	*********						
19	SMALL CHRYSOPHYCEAE	50	7184	6	4.57	57472	2.87
20	CHRYSOCHROMULINA PARVA	50	7184	17	4.57	122128	6.11
21	MALLOMONAS PSEUDOCORONATA	4000	200	1	19.69	200	0.80
22	DINOBRYON SOCIALE	280	7184	2	8.12	14368	4.02
23	CHRYSOIKOS SKUJA	15	7184	1	3.06	7184	0.11
24	SALPINGOECA SP.	380	7184	2	8.99	14368	5.46
	*********						
	GROUP 5						
	*********						
25	[illegible]	21600	7184	3	34.88	21552	465.52
26	MELOSIRA SP.	2975	7184	2	17.54	14368	42.74
27	CYCLOTELLA SPP.	15	7184	3	3.06	21552	0.32
28	SYNEDRA ACUS	140	200	8	6.44	1600	0.22
29	SYNEDRA ACUS	220	200	15	7.49	3000	0.66
30	SYNEDRA ULNA	2325	200	10	16.44	2000	4.65
31	ASTERIONELLA FORMOSA	140	200	507	6.44	101400	14.20
32	ASTERIONELLA FORMOSA	220	200	54	7.49	10800	2.38
33	STEPHANODISCUS ASTREAE	3600	200	18	19.02	3600	12.96
34	DIATOMA SP	160	200	10	6.74	2000	0.32
	*********						
	GROUP 6						
	*********						
35	RHODOMONAS MINUTA	100	7184	315	5.76	2262960	226.30
36	RHODOMONAS MINUTA	340	7184	55	8.66	395120	134.34
37	CRYPTOMONAS EROSA	2700	200	172	17.26	3440	92.88
38	CRYPTOMONAS MARSSONII	2550	200	71	16.95	14200	36.21
39	CRYPTOMONAS ROSTRATIFORM	4400	200	10	20.33	2000	8.80
40	KATABLEPHARIS OVALIS	100	7184	25	5.76	179600	17.96
	*********						
	GROUP 7						
	*********						
41	PERIDINIUM INCONSPICUM	4000	200	5	19.69	1000	4.00
42	CERATIUM HIRUNDENELLA	50000	200	2	45.71	400	20.00

CONT'D: STEPHENS LAKE STN 2 06 JULY 87

********** SUMMARY **********

GROUP NUMBER	CELLS/L	% OF TOTAL	BIOMASS mg/m 3	% OF TOTAL
1	21784.00	0.59	114.27	8.63
2	367384.00	9.99	102.36	7.73
3	600.00	0.02	5.25	0.40
4	215720.00	5.87	19.37	1.46
5	182472.00	4.96	541.95	40.94
6	2888280.00	78.54	516.49	39.02
7	1400.00	0.04	24.00	1.81
TOTAL	3677640.00		1323.70	

****

AVERAGE EQUIVELANT SPHEREICAL VOLUME= 14.99

DIVERSITY INDICES:

MARGALEF'S INDEX = 2.58

SHANNON-WEAVER INDEX = 2.41

STEPHENS STN

06 JUL 87 (DAY 187)

* SPECIES=41
STRATA DEPTH=
STRATA VOL.=
FILE NAME = ST06JUL87

REC #	SPECIES	CELL VOLUME	CORR. FACT.	RAW COUNT	ESD	CELLS /LITER	BIOMASS mg/m 3
	GROUP 1						
3	APHANOTHECE SP.	2550	7184	1	16.95	7184	18.32
4	APHANIZOMENON FLOS-AQUAE	3000	200	27	17.89	5400	16.20
5	ANABAENA PLANCTONICA	14650	200	1	30.36	200	2.93
6	ANABAENA CIRCINALIS	7850	200	4	24.66	800	6.28
7	LYNGBYA SP.	350	7184	2	8.74	14368	5.03
	GROUP 2						
8	CHLAMYDOMONAS SPP.	80	7184	1	5.35	7184	0.57
9	CHLAMYDOMONAS SPP.	1800	7184	2	15.09	14368	25.86
10	PEDIASTRUM DUPLEX	69450	200	3	51.00	600	41.67
11	CHODATELLA SP.	42	7184	3	4.31	21552	0.91
12	MONORAPHIDIUM SETIFORME	100	7184	10	5.76	71840	7.18
13	MONORAPHIDIUM CONTORTUM	30	7184	9	3.86	64656	1.94
14	MONORAPHIDIUM MINUTUM	10	7184	9	2.67	64656	0.65
15	PLANCTONEMA LAUTERBORNII	40	7184	8	4.24	57472	2.30
16	BOTRYOCOCCUS BRAUNII	41600	200	2	42.99	400	16.64
	GROUP 3						
17	TRACHELOMONAS VOLVOCINA	5250	200	2	21.56	400	2.10
	GROUP 4						
18	SMALL CHRYSOPHYCEAE	50	7184	21	4.57	150864	7.54
19	CHRYSOCHROMULINA PARVA	50	7184	6	4.57	43104	2.16
20	DINOBRYON BAVARICUM	430	7184	25	9.36	179600	77.23
21	BICOECA LACUSTRIS	380	7184	3	8.99	21552	8.19
22	BICOECA AINIKKIAE	380	7184	1	8.99	7184	2.73
23	SALPINGOECA SP.	350	7184	15	8.74	107760	37.72
	GROUP 5						
24	MELOSIRA GRANULATA	37900	7184	1	41.68	7184	272.27
~~25~~	~~MELOSIRA ITALICA~~	~~380~~	~~7184~~	~~1~~	~~8.99~~	~~7184~~	~~2.73~~
26	MELOSIRA SP.	2350	7184	1	16.50	7184	16.88
27	MELOSIRA SP.	91600	7184	1	55.90	7184	658.15
28	CYCLOTELLA SPP.	70	7184	1	5.11	7184	0.50
29	TABELLARIA FENESTRATA	2100	200	4	15.89	800	1.68
30	SYNEDRA ACUS	220	200	27	7.49	5400	1.19
31	SYNEDRA ULNA	2325	200	5	16.44	1000	2.33
32	ASTERIONELLA FORMOSA	140	200	306	6.44	61200	8.57
33	ASTERIONELLA FORMOSA	220	200	16	7.49	3200	0.70
34	STEPHANODISCUS ASTREAE	3600	200	8	19.02	1600	5.76
35	DIATOMA SP	630	200	10	10.64	2000	1.26
	GROUP 6						
36	RHODOMONAS MINUTA	80	7184	107	5.35	768688	61.50
37	RHODOMONAS MINUTA	340	7184	16	8.66	114944	39.08
38	CRYPTOMONAS EROSA	2700	200	15	17.28	3000	8.10
39	CRYPTOMONAS EROSA	2900	200	56	17.69	11200	32.48
40	CRYPTOMONAS ROSTRATIFORM	4450	200	6	20.41	1200	5.34
41	KATABLEPHARIS OVALIS	100	7184	11	5.76	79024	7.90
	GROUP 7						
42	PERIDINIUM INCONSPICUM	3350	200	3	18.56	600	2.01
43	PERIDINIUM GOSLAVIENSE	13000	200	2	29.17	400	5.20

CONT'D: STEPHENS LAKE STN3 06 JULY 87

********** SUMMARY **********

GROUP NUMBER	CELLS/L	% OF TOTAL	BIOMASS mg/m^3	% OF TOTAL
1	27952.00	1.45	48.76	3.44
2	302728.00	15.67	97.72	6.89
3	400.00	0.02	2.10	0.15
4	510064.00	26.41	135.56	9.56
5	111120.00	5.75	971.93	68.56
6	978056.00	50.64	154.40	10.89
7	1000.00	0.05	7.21	0.51
TOTAL	1931320.00		1417.68	

****

AVERAGE EQUIVELANT SPHEREICAL VOLUME= 15.49

DIVERSITY INDICES:

MARGALEF'S INDEX = 2.76

SHANNON-WEAVER INDEX = 3.40

STEPHENS ST1

03 AUG 87 (DAY 215)

SPECIES=41
STRATA DEPTH=
STRATA VOL.=
FILE NAME = ST103AUG87

REC #	SPECIES	CELL VOLUME	CORR. FACT.	RAW COUNT	RAW ESD	CELLS /LITER	BIOMASS mg/m 3
	GROUP 1						
3	APHANIZOMENON FLOS-AQUAE	3500	200	32	18.84	6400	22.40
4	APHANIZOMENON FLOS-AQUAE	21000	200	5	34.22	1000	21.00
5	ANABAENA PLANCTONICA	17200	200	8	32.09	1600	27.52
6	ANABAENA CIRCINALIS	7050	200	8	23.79	1600	11.28
7	LYNGBYA SP.	220	7184	1	7.49	7184	1.58
	GROUP 2						
8	CHLAMYDOMONAS SPP.	80	7184	2	5.35	14368	1.15
9	PAULSCHULZIA PSEUDOVOLVOX	30	7184	24	3.86	172416	5.17
10	CHODATELLA SP.	70	7184	1	5.11	7184	0.50
11	MONORAPHIDIUM SETIFORME	100	7184	1	5.76	7184	0.72
12	MONORAPHIDIUM CONTORTUM	30	7184	11	3.66	79024	2.37
13	MONORAPHIDIUM MINUTUM	10	7184	2	2.67	14368	0.14
14	BOTRYOCOCCUS BRAUNII	41600	200	3	42.99	600	24.96
15	TETRAEDRON CAUDATA	15	7184	1	3.06	7184	0.11
	GROUP 3						
16	EUGLENA ACUS	8075	200	1	24.89	200	1.62
	GROUP 4						
17	SMALL CHRYSOPHYCEAE	50	7184	37	4.57	265808	13.29
18	LARGE CHRYSOPHYCEAE	380	7184	2	8.99	14368	5.46
19	CHRYSOCHROMULINA PARVA	50	7184	26	4.57	186784	9.34
20	MALLOMONAS PSEUDOCORONATA	3350	200	1	18.56	200	0.67
21	DINOBRYON DIVERGENS	3500	200	1	18.84	200	0.70
22	DINOBRYON SOCIALE	240	7184	7	7.71	50288	12.07
23	DINOBRYON SOCIALE	5190	200	5	21.48	1000	5.19
24	CHRYSOIKOS SKUJA	50	7184	1	4.57	7184	0.36
25	SALPINGOECA SP.	380	7184	5	8.99	35920	13.65
	GROUP 5						
26	MELOSIRA ITALICA	20675	7184	2	34.05	14368	297.06
27	CYCLOTELLA SPP.	25	7184	4	3.60	28736	0.72
28	RHIZOSOLENIA ERIENSE	800	7184	8	11.52	57472	45.98
29	SYNEDRA ACUS	140	200	30	6.44	6000	0.84
30	SYNEDRA ACUS	400	200	70	9.14	14000	5.60
31	SYNEDRA ULNA	2300	200	1	16.38	200	0.46
32	ASTERIONELLA FORMOSA	120	200	2	8.29	400	0.05
33	ASTERIONELLA FORMOSA	220	200	9	7.49	1800	0.40
34	STEPHANODISCUS ASTREAE	3600	200	8	19.02	1600	5.76
35	DIATOMA SP	670	200	2	10.86	400	0.27
36	GYROZIGMA SP	7600	200	2	24.39	400	3.04
	GROUP 6						
37	RHODOMONAS MINUTA	80	7184	64	5.35	459776	36.78
38	RHODOMONAS MINUTA	340	7184	18	6.66	129312	43.97
39	CRYPTOMONAS EROSA	2925	200	5	17.74	1000	2.93
40	CRYPTOMONAS MARSSONII	2470	200	1	16.77	200	0.49
41	KATABLEPHARIS OVALIS	100	7184	8	5.76	57472	5.75
	GROUP 7						
42	GYMNODINIUM SP.	16280	200	1	31.45	200	3.26
43	PERIDINIUM INCONSPICUM	2450	200	3	16.73	600	1.47

CONT'D: STEPHENS LAKE STN1 09 AUG 87

********** SUMMARY **********

GROUP NUMBER	CELLS/L	% OF TOTAL	BIOMASS mg/m 3	% OF TOTAL
1	17784.00	1.07	82.94	13.19
2	302328.00	18.26	35.13	5.52
3	200.00	0.01	1.62	0.25
4	561752.00	33.92	60.73	9.55
5	125376.00	7.57	360.17	56.61
6	647760.00	39.12	89.91	14.13
7	800.00	0.05	4.73	0.74
TOTAL	1656000.00		636.22	

****

AVERAGE EQUIVELANT SPHERICAL VOLUME= 13.75

DIVERSITY INDICES:

MARGALEF'S INDEX = 2.79

SHANNON-WEAVER INDEX = 3.45

* STEPHENS STD *
* *
* 03 AUG 87 (DAY 215) *

* SPECIES=38
STRATA DEPTH=
STRATA VOL.=
FILE NAME = ST203AUG87

REC #	SPECIES	CELL VOLUME	CORR. FACT.	RAW COUNT	ESD	CELLS /LITER	BIOMASS mg m^3
	*********						
	GROUP 1						
	*********						
3	GOMPHOSPHAERIA LACUSTRIS	12500	200	8	26.79	1600	20.00
4	APHANIZOMENON FLOS-AQUAE	3500	200	16	18.94	3200	11.20
5	ANABAENA PLANCTONICA	16280	200	10	31.45	2000	32.56
6	ANABAENA CIRCINALIS	7050	200	22	23.79	4400	31.02
7	LYNGBYA SP.	220	7184	6	7.49	43104	9.48
	*********						
	GROUP 2						
	*********						
8	CHLAMYDOMONAS SPP.	30	7184	3	3.86	21552	0.65
9	CHLAMYDOMONAS SPP.	520	7184	1	9.98	7184	3.74
10	PEDIASTRUM DUPLEX	77950	200	1	52.00	200	15.59
11	CHODATELLA SP.	75	7184	2	5.23	14368	1.08
12	MONORAPHIDIUM SETIFORME	100	7184	1	5.76	7184	0.72
13	MONORAPHIDIUM MINUTUM	10	7184	3	2.67	21552	0.22
14	MONORAPHIDIUM MINUTUM	30	7184	16	3.86	114944	3.45
15	ELAKATOTHRIX GELATINOSA	30	7184	2	3.86	14368	0.43
16	CLOSTERIUM SP.	1400	200	6	13.86	1200	1.68
17	BOTRYOCOCCUS BRAUNII	41600	200	2	42.99	400	16.64
18	COLLODICTYON SP.	800	7184	14	11.52	100576	80.46
	*********						
	GROUP 3						
	*********						
19	TRACHELOMONAS VOLVOCINA	5250	200	10	21.56	2000	10.50
	*********						
	GROUP 4						
	*********						
20	SMALL CHRYSOPHYCEAE	50	7184	11	4.57	79024	3.95
21	CHRYSOCHROMULINA PARVA	50	7184	1	4.57	7184	0.36
22	MALLOMONAS PSEUDOCORONATA	3600	200	1	19.02	200	0.72
23	BICOECA AINIKKIAE	380	7184	1	8.99	7184	2.73
24	STELEXMONAS DICHOTOMS	100	7184	1	5.76	7184	0.72
	*********						
	GROUP 5						
	*********						
25	MELOSIRA GRANULATA	24400	7184	2	40.78	14368	474.25
26	MELOSIRA ITALICA	22900	7184	1	35.22	7184	164.51
27	CYCLOTELLA SPP.	45	7184	6	4.41	43104	1.94
28	RHIZOSOLENIA ERIENSE	800	7184	1	11.52	7184	5.75
29	SYNEDRA ACUS	400	200	16	9.14	3200	1.28
30	ASTERIONELLA FORMOSA	130	200	66	6.29	13200	1.72
31	ASTERIONELLA FORMOSA	220	200	26	7.49	5200	1.14
32	STEPHANODISCUS ASTREAE	3600	200	13	19.02	2600	9.36
	*********						
	GROUP 6						
	*********						
33	RHODOMONAS MINUTA	80	7184	216	5.25	1551744	124.14
34	RHODOMONAS MINUTA	340	7184	33	8.66	237072	80.60
35	CRYPTOMONAS EROSA	2800	200	124	17.49	24800	69.44
36	CRYPTOMONAS MARSSONII	2450	200	6	16.72	1200	2.94
37	KATABLEPHARIS OVALIS	100	7184	7	5.76	50288	5.03
	*********						
	GROUP 7						
	*********						
38	PERIDINIUM INCONSPICUM	3380	200	4	18.62	800	2.70

CONT'D: STEPHENS LAKE STN2 03 AUG 87

********** SUMMARY **********

GROUP NUMBER	CELLS/L	% OF TOTAL	BIOMASS mg/m 3	% OF TOTAL
1	54304.00	2.24	104.26	8.60
2	303528.00	12.53	124.64	10.28
3	2000.00	0.08	10.50	0.87
4	100776.00	4.16	8.48	0.70
5	96040.00	3.96	679.96	56.07
6	1865104.00	76.99	282.15	23.27
7	800.00	0.03	2.70	0.22
TOTAL	2422552.00		1212.70	

****

AVERAGE EQUIVELANT SPHEREICAL VOLUME= 14.93

DIVERSITY INDICES:

MARGALEF'S INDEX = 2.38

SHANNON-WEAVER INDEX = 2.27

```
##############################
# STEPHENS     STD           #
#                            #
# 03 AUG 87 (DAY 215)        #
##############################
```

SPECIES=36
STRATA DEPTH=
STRATA VOL.=
FILE NAME = STDCDAUG87

REC #	SPECIES	CELL VOLUME	CORR. FACT.	RAW COUNT	ESD	CELLS /LITER	BIOMASS mg/m^3
	GROUP 1						
3	APHANOTHECE SP.	4100	7184	1	19.86	7184	29.45
4	GOMPHOSPHAERIA LACUSTRIS	9200	200	4	26.00	800	7.36
5	APHANIZOMENON FLOS-AQUAE	3500	200	12	18.64	2400	8.40
6	ANABAENA PLANCTONICA	13179	200	4	29.34	800	10.58
7	ANABAENA CIRCINALIS	7850	200	13	24.66	2600	20.41
	GROUP 2						
8	CHLAMYDOMONAS SPP.	520	7184	2	9.98	14368	7.47
9	PEDIASTRUM DUPLEX	77950	200	7	53.00	1400	109.13
10	OOCYSTIS SUBMARINA V LAC.	50	7184	6	4.57	43104	2.16
11	MONORAPHIDIUM SETIFORME	100	7184	3	5.76	21552	2.16
12	MONORAPHIDIUM CONTORTUM	30	7184	3	3.86	21552	0.65
13	MONORAPHIDIUM MINUTUM	100	7184	2	5.76	14368	1.44
14	CLOSTERIUM SP.	1350	200	1	15.71	200	0.27
15	BOTRYOCOCCUS BRAUNII	41600	200	3	42.99	600	24.96
16	SCHROEDERIA SETIGERA	130	7184	2	6.29	14368	1.87
17	COLLODICTYON SP.	800	7184	2	11.52	14368	11.49
	GROUP 3						
18	TRACHELOMONAS VOLVOCINA	5275	200	13	21.60	2600	13.72
	GROUP 4						
19	SMALL CHRYSOPHYCEAE	50	7184	25	4.57	179600	8.98
20	CHRYSOCHROMULINA PARVA	50	7184	5	4.57	35920	1.80
21	MALLOMONAS CAUDATA	4300	200	2	20.18	400	1.72
22	BICOECA LACUSTRIS	380	7184	5	8.99	35920	13.65
	GROUP 5						
23	MELOSIRA GRANULATA	19855	7184	1	33.60	7184	142.64
24	MELOSIRA ITALICA	22900	7184	7	35.33	50288	1151.60
25	SYNEDRA ACUS	140	200	3	6.44	1000	0.14
26	SYNEDRA ACUS	400	200	17	9.14	3400	1.36
27	SYNEDRA ULNA	2325	200	3	16.44	600	1.40
28	ASTERIONELLA FORMOSA	130	200	86	6.29	17200	2.24
29	ASTERIONELLA FORMOSA	220	200	76	7.49	15200	3.34
30	STEPHANODISCUS ASTREAE	3600	200	9	19.02	1800	6.48
31	DIATOMA SP	100	200	16	5.76	3200	0.32
32	GYROZIGMA SP	7650	200	1	24.45	200	1.53
	GROUP 6						
33	RHODOMONAS MINUTA	80	7184	114	5.35	818976	65.52
34	RHODOMONAS MINUTA	340	7184	32	8.66	229888	78.16
35	CRYPTOMONAS EROSA	2700	200	151	17.28	30200	81.54
36	CRYPTOMONAS MARSSONII	2470	200	35	16.77	7000	17.29
37	CRYPTOMONAS ROSTRATIFORM	5500	200	4	21.90	800	4.40
38	KATABLEPHARIS OVALIS	100	7184	5	5.76	35920	3.59

########## SUMMARY ##########

GROUP NUMBER	CELLS/L	% OF TOTAL	BIOMASS mg/m^3	% OF TOTAL
1	13784.00	0.84	76.21	4.14
2	145860.00	8.91	161.59	8.79
3	2600.00	0.16	13.72	0.75
4	251840.00	15.38	26.15	1.42
5	100072.00	6.11	1311.04	71.28
6	1122784.00	68.59	250.50	13.62
7	0.00	0.00	0.00	0.00
TOTAL	1636960.00		1839.20	

AVERAGE EQUIVELANT SPHEREICAL VOLUME= 15.99

DIVERSITY INDICES:
MARGALEF'S INDEX = 2.45
SHANNON-WEAVER INDEX = 2.78

```
**********
*  STEPHENS    ST1 138   *
*                         *
*  31 AUG 87 (DAY 243)    *
***************************
```

```
* SPECIES=34
STRATA DEPTH=
STRATA VOL.=
FILE NAME = ST131AUG87
```

REC #	SPECIES	CELL VOLUME	CORR. FACT.	RAW COUNT	ECD	CELLS /LITER	BIOMASS mg/m^3
	********** GROUP 1 **********						
3	MERISMOPEDIA GLAUCA	8	7184	10	2.48	71840	0.57
4	APHANIZOMENON FLOS-AQUAE	3600	200	254	19.02	50800	18.88
5	APHANIZOMENON FLOS-AQUAE	27000	200	11	37.22	2200	59.40
6	ANABAENA PLANCTONICA	21500	200	7	34.50	1400	30.10
7	ANABAENA CIRCINALIS	9200	200	13	26.00	2600	23.92
8	ANABAENA SP.	230	7184	6	7.60	43104	9.91
9	LYNGBYA SP.	300	7184	6	8.31	43104	12.93
	********** GROUP 2 **********						
10	CHLAMYDOMONAS SPP.	30	7184	1	3.86	7184	0.22
11	CHLAMYDOMONAS SPP.	45	7184	2	4.41	14368	0.65
12	CHLAMYDOMONAS SPP.	110	7184	2	5.94	14368	1.58
13	CHODATELLA SP.	45	7184	1	4.41	7184	0.32
14	DICTYOSPHAERIUM SIMPLEX	8	7184	16	2.48	114944	0.92
15	MONORAPHIDIUM SETIFORME	100	7184	1	5.76	7184	0.72
16	MONORAPHIDIUM CONTORTUM	30	7184	21	3.86	150864	4.53
17	MONORAPHIDIUM MINUTUM	10	7184	7	2.67	50288	0.50
18	ELAKATOTHRIX GELATINOSA	25	7184	1	3.63	7184	0.18
19	CLOSTERIUM SP.	3300	200	1	18.47	200	0.66
20	BOTRYOCOCCUS BRAUNII	41600	200	3	42.99	600	24.96
	********** GROUP 3 **********						
21	EUGLENA ACUS	9700	200	3	26.46	600	5.82
	********** GROUP 4 **********						
22	SMALL CHRYSOPHYCEAE	50	7184	15	4.57	107760	5.39
23	CHRYSOCHROMULINA PARVA	50	7184	30	4.57	215520	10.78
24	MALLOMONAS PSEUDOCORONATA	3200	200	2	18.28	400	1.28
25	DINOBRYON SOCIALE	6400	200	2	23.04	400	2.56
	********** GROUP 5 **********						
26	CYCLOTELLA SPP.	25	7184	3	3.63	21552	0.54
27	RHIZOSOLENIA ERIENSE	800	7184	2	11.52	14368	11.49
28	SYNEDRA ACUS	400	200	28	9.14	5600	2.24
29	ASTERIONELLA FORMOSA	150	200	140	6.29	28000	3.64
30	ASTERIONELLA FORMOSA	220	200	32	7.49	6400	1.41
31	STEPHANODISCUS ASTREAE	3600	200	6	19.02	1200	4.32
	********** GROUP 6 **********						
32	RHODOMONAS MINUTA	80	7184	55	5.35	395120	31.61
33	RHODOMONAS MINUTA	340	7184	6	8.66	43104	14.66
34	CRYPTOMONAS EROSA	2700	200	6	17.28	1200	3.32
35	KATABLEPHARIS OVALIS	100	7184	4	5.76	28736	2.87
	********** GROUP 7 **********						
36	GYMNODINIUM SP.	16250	200	1	31.43	200	3.25

********** SUMMARY **********

GROUP NUMBER	CELLS/L	% OF TOTAL	BIOMASS mg/m^3	% OF TOTAL
1	215048.00	14.72	319.72	69.33
2	374368.00	25.64	35.23	7.64
3	600.00	0.04	5.82	1.26
4	324080.00	22.20	20.00	4.34
5	77120.00	5.28	23.64	5.13
6	468560.00	32.09	53.46	11.59
7	200.00	0.01	3.25	0.70
TOTAL	1459976.00		461.13	

AVERAGE EQUIVELANT SPHEREICAL VOLUME= 12.83

DIVERSITY INDICES:

MARGALEF'S INDEX = 2.32

STEPHENS ST2

31 AUG 87 (DAY 243)

SPECIES=43
STRATA DEPTH=
STRATA VOL.=
FILE NAME = ST2D1AUG87

REC #	SPECIES	CELL VOLUME	CORR. FACT.	RAW COUNT	ESD	CELLS /LITER	BIOMASS mg/m^3
	GROUP 1						
3	GOMPHOSPHAERIA LACUSTRIS	7225	200	11	23.99	2200	15.90
4	GOMPHOSPHAERIA LACUSTRIS	41600	200	3	42.99	600	24.96
5	MERISMOPEDIA GLAUCA	8	7184	1	2.48	7184	0.06
6	APHANIZOMENON FLOS-AQUAE	3600	200	70	19.02	14000	50.40
7	APHANIZOMENON FLOS-AQUAE	36000	200	4	40.97	800	28.80
8	ANABAENA PLANCTONICA	21300	200	2	34.39	400	8.52
9	ANABAENA CIRCINALIS	10000	200	5	26.73	1000	10.00
	GROUP 2						
10	CHLAMYDOMONAS SPP.	110	7184	1	5.94	7184	0.79
11	CHLAMYDOMONAS SPP.	190	7184	1	7.15	7184	1.36
12	PEDIASTRUM DUPLEX	69400	200	1	50.95	200	13.88
13	OOCYSTIS SUBMARINA V LAC.	80	7184	6	5.35	43104	3.45
14	SCENEDESMUS SP.	40	7184	4	4.24	28736	1.15
15	DICTYOSPHAERIUM SIMPLEX	15	7184	48	3.06	344832	5.17
16	MONORAPHIDIUM CONTORTUM	30	7184	6	3.86	43104	1.29
17	MONORAPHIDIUM MINUTUM	10	7184	1	2.67	7184	0.07
18	COELASTRUM SP.	12500	200	2	28.79	400	5.00
19	CLOSTERIUM SP.	3600	200	1	19.02	200	0.72
	GROUP 3						
20	TRACHELOMONAS VOLVOCINA?	5200	200	1	21.49	200	1.04
	GROUP 4						
21	SMALL CHRYSOPHYCEAE	50	7184	5	4.57	35920	1.80
22	CHRYSOCHROMULINA PARVA	50	7184	5	4.57	35920	1.80
23	MALLOMONAS PSEUDOCORONATA	2900	200	1	17.69	200	0.58
24	BICOECA LACUSTRIS	380	7184	1	8.99	7184	2.73
25	SALPINGOECA SP.	380	7184	6	8.99	43104	16.38
26	STELEXMONAS DICHOTOMS	45	7184	4	4.41	28736	1.29
	GROUP 5						
27	MELOSIRA GRANULATA	37940	7184	16	41.69	114944	4360.98
28	MELOSIRA ITALICA	27000	7184	7	37.22	50288	1357.73
29	MELOSIRA SP.	8125	7184	9	24.94	64656	525.33
30	MELOSIRA SP.	75400	7184	27	52.42	193968	14625.19
31	RHIZOSOLENIA ERIENSE	800	7184	1	11.52	7184	5.75
32	TABELLARIA FENESTRATA	2150	200	1	16.01	200	0.43
33	FRAGILARIA CROTONENSIS	120	200	52	6.12	10400	1.25
34	SYNEDRA ACUS	140	200	82	6.44	16400	2.30
35	SYNEDRA ACUS	400	200	11	9.14	2200	0.88
36	SYNEDRA ULNA	2300	200	4	16.38	800	1.84
37	ASTERIONELLA FORMOSA	130	200	116	6.29	23200	3.02
38	ASTERIONELLA FORMOSA	220	200	133	7.49	26600	5.85
39	STEPHANODISCUS ASTREAE	3600	200	13	19.02	2600	9.36
40	GYROZIGMA SP	7690	200	2	24.49	400	3.08
	GROUP 6						
41	RHODOMONAS MINUTA	80	7184	80	5.35	574720	45.98
42	RHODOMONAS MINUTA	340	7184	12	8.66	86208	29.31
43	CRYPTOMONAS EROSA	2900	200	34	17.69	6800	19.72
44	CRYPTOMONAS MARSSONII	2250	200	6	16.26	1200	2.70
45	KATABLEPHARIS OVALIS	100	7184	3	5.76	21552	2.16

CONT'D: THREEPOINT LAKE STN 2 31 AUG 87

********** SUMMARY **********

GROUP NUMBER	CELLS/L	% OF TOTAL	BIOMASS mg/m^3	% OF TOTAL
1	26184.00	1.40	138.63	0.65
2	482128.00	25.87	32.89	0.16
3	200.00	0.01	1.04	0.00
4	151064.00	8.10	24.57	0.12
5	513840.00	27.57	20902.01	98.60
6	690480.00	37.04	99.86	0.47
7	0.00	0.00	0.00	0.00
TOTAL	1863896.00		21200.01	

****

AVERAGE EQUIVELANT SPHEREICAL VOLUME= 16.87

DIVERSITY INDICES:

MARGALEF'S INDEX = 2.91

SHANNON-WEAVER INDEX = 3.55

```
**************************
* STEPHENS    STD  141   *
*                        *
* 31 AUG 87 (DAY 243)    *
**************************
```

* SPECIES=41
STRATA DEPTH=
STRATA VOL.=
FILE NAME = ST3I1AUG87

REC #	SPECIES	CELL VOLUME	CORR. FACT.	RAW COUNT	ESD	CELLS /LITER	BIOMASS mg/m 3
	****						
	GROUP 1						
	****						
3	GOMPHOSPHAERIA LACUSTRIS	7200	200	17	22.96	3400	24.48
4	APHANIZOMENON FLOS-AQUAE	3500	200	38	18.84	7600	26.60
5	APHANIZOMENON FLOS-AQUAE	18000	200	5	32.52	1000	18.00
6	ANABAENA PLANCTONICA	18720	200	2	32.94	400	7.49
	****						
	GROUP 2						
	****						
7	CHLAMYDOMONAS SPP.	60	7184	4	4.86	28736	1.72
8	CHLAMYDOMONAS SPP.	125	7184	1	6.20	7184	0.90
9	PEDIASTRUM DUPLEX	54350	200	1	47.00	200	10.87
10	OOCYSTIS SUBMARINA V LAC.	42	7184	6	4.31	43104	1.81
11	MONORAPHIDIUM SETIFORME	100	7184	2	5.76	14368	1.44
12	MONORAPHIDIUM CONTORTUM	300	7184	9	8.31	64656	19.40
13	MONORAPHIDIUM MINUTUM	10	7184	10	2.67	71840	0.72
14	CRUCIGENIELLA SPP.	15	7184	4	3.06	28736	0.43
15	ELAKATOTHRIX GELATINOSA	30	7184	1	3.86	7184	0.22
16	CLOSTERIUM SP.	1475	200	4	14.12	800	1.18
17	BOTRYOCOCCUS BRAUNII	69400	200	1	50.99	200	13.88
18	SCHROEDERIA SETIGERA	110	7184	1	5.94	7184	0.79
	****						
	GROUP 3						
	****						
19	TRACHELOMONAS VOLVOCINA	5250	200	6	21.56	1200	6.30
	****						
	GROUP 4						
	****						
20	SMALL CHRYSOPHYCEAE	50	7184	12	4.57	86208	4.31
21	CHRYSOCHROMULINA PARVA	50	7184	14	4.57	100576	5.03
22	MALLOMONAS PSEUDOCORONATA	2900	200	1	17.69	200	0.58
23	DINOBRYON SOCIALE	4200	200	1	20.02	200	0.84
24	BICOECA LACUSTRIS	380	7184	2	8.99	14368	5.46
25	SALPINGOECA SP.	380	7184	41	8.99	294544	111.93
26	STELEXMONAS DICHOTOMS	80	7184	10	5.35	71840	5.75
	****						
	GROUP 5						
	****						
27	MELOSIRA GRANULATA	3680	7184	4	27.98	28736	824.15
28	MELOSIRA SP.	735	7184	6	17.33	43104	117.48
29	MELOSIRA SP.	57725	7184	3	47.95	21552	1244.09
30	RHIZOSOLENIA ERIENSE	800	7184	1	11.52	7184	5.75
31	FRAGILARIA CROTONENSIS	140	200	15	6.44	3000	0.42
32	SYNEDRA ACUS	140	200	36	6.44	7200	1.01
33	SYNEDRA ACUS	400	200	9	9.14	1800	0.72
34	SYNEDRA ULNA	2025	200	4	16.44	800	1.62
35	ASTERIONELLA FORMOSA	130	200	112	6.29	22400	2.91
36	ASTERIONELLA FORMOSA	220	200	62	7.49	12400	2.73
37	STEPHANODISCUS ASTREAE	3600	200	5	19.02	1000	3.60
	****						
	GROUP 6						
	****						
38	RHODOMONAS MINUTA	80	7184	75	5.35	538800	43.10
39	RHODOMONAS MINUTA	340	7184	24	8.66	172416	58.62
40	CRYPTOMONAS EROSA	2900	200	32	17.69	6400	18.56
41	CRYPTOMONAS MARSSONII	2375	200	18	16.55	3600	8.55
42	CRYPTOMONAS ROSTRATIFORM	5500	200	4	21.90	800	4.40
43	KATABLEPHARIS OVALIS	100	7184	2	5.76	14368	1.44

CONT'D: STEPHENS LAKE, STN3 31 AUG 87

********** SUMMARY **********

GROUP NUMBER	CELLS/L	% OF TOTAL	BIOMASS mg/m^3	% OF TOTAL
1	12400.00	0.71	76.57	2.93
2	274192.00	15.74	53.35	2.04
3	1200.00	0.07	6.30	0.24
4	567936.00	32.60	132.89	5.13
5	149976.00	8.61	2207.57	84.51
6	736384.00	42.27	134.67	5.16
7	0.00	0.00	0.00	0.00
TOTAL	1742088.00		2612.36	

****

AVERAGE EQUIVELANT SPHEREICAL VOLUME= 15.10

DIVERSITY INDICES:

MARGALEF'S INDEX = 2.78

SHANNON-WEAVER INDEX = 3.57

APPENDIX B6. Phytoplankton data from Threepoint Lake, 1987.

Group	
1	Cyanophyceae - blue greens
2	Chlorophyceae - greens
3	Euglenophyceae - euglenophytes
4	Chrysophyceae - chrysophytes
5	Bacillariophyceae - diatoms
6	Cryptophyceae - cryptophytes
7	Peridineae - dinoflagellates

THREEPOINT S01
14 MAY 87 (DAY 134)

SPECIES=31
STRATA DEPTH=
STRATA VOL.=
FILE NAME = S0114MAY87

REC #	SPECIES	CELL VOLUME	CORR. FACT.	RAW COUNT	ESD	CELLS /LITER	BIOMASS mg/m^3
	GROUP 1						
3	APHANIZOMENON FLOS-AQUAE	5000	7184	2	21.22	14368	71.84
	GROUP 2						
4	CHLAMYDOMONAS SPP.	160	7184	5	6.74	35920	5.75
5	CHODATELLA SP.	60	7184	1	4.86	7184	0.43
6	SCENEDESMUS QUADRICAUDA	100	7184	4	5.76	28736	2.87
7	MONORAPHIDIUM SETIFORME	90	7184	7	5.56	50288	4.53
8	MONORAPHIDIUM CONTORTUM	35	7184	5	4.06	35920	1.26
9	KICHNERELLA LUNARIS	100	7184	14	5.76	100576	10.06
10	CLOSTERIUM SP.	900	7184	1	11.98	7184	6.47
11	EUDORINA SP	525	7184	8	10.01	57472	30.17
	GROUP 3						
12	EUGLENA ACUS	13000	200	1	29.17	200	2.60
	GROUP 4						
13	SMALL CHRYSOPHYCEAE	50	7184	21	4.57	150864	7.54
14	LARGE CHRYSOPHYCEAE	380	7184	2	8.99	14368	5.46
15	BICOECA AINIKKIAE	390	7184	1	9.06	7184	2.80
16	STELEXOMONAS DICHOTOMS	800	7184	6	11.52	43104	34.48
17	MALLOMONAS TEILING.	1550	200	1	14.36	200	0.31
	GROUP 5						
18	MELOSIRA GRANULATA	37500	7184	7	41.53	50288	1885.80
19	MELOSIRA ITALICA	23000	7184	2	35.20	14368	330.46
20	MELOSIRA SP.	30000	7184	4	38.55	28736	862.08
21	CYCLOTELLA COMTA	50	200	7	4.57	1400	0.07
22	CYCLOTELLA COMTA	380	7184	6	8.99	43104	16.38
23	TABELLARIA FENESTRATA	5000	200	9	21.22	1800	9.00
24	SYNEDRA ACUS	440	200	11	9.44	2200	0.97
25	ASTERIONELLA FORMOSA	150	200	67	6.59	13400	2.01
26	ASTERIONELLA FORMOSA	225	200	16	7.15	3200	0.72
27	SURIRELLA SP	2300	7184	1	16.38	7184	16.52
	GROUP 6						
28	RHODOMONAS MINUTA	400	7184	56	9.14	402304	160.92
29	CRYPTOMONAS EROSA	1300	200	11	13.54	2200	2.86
30	CRYPTOMONAS ROSTRATIFORM	2660	200	33	17.19	6600	17.56
	GROUP 7						
31	GYMNODINIUM SP.	19500	200	14	33.39	2800	54.60
32	PERIDINIUM WILLEI	2100	200	8	15.89	1600	3.36
33	PERIDINIUM ACICULIFERRIM	9000	200	22	25.81	4400	39.60

SUMMARY

GROUP NUMBER	CELLS/L	% OF TOTAL	BIOMASS mg/m^3	% OF TOTAL
1	14368.00	1.26	71.84	2.00
2	323280.00	28.38	61.53	1.71
3	200.00	0.02	2.60	0.07
4	215720.00	18.94	50.60	1.41
5	165680.00	14.54	3124.01	87.03
6	411104.00	36.09	181.34	5.05
7	8800.00	0.77	97.56	2.72
TOTAL	1139152.00		3589.48	

AVERAGE EQUIVELANT SPHEREICAL VOLUME= 14.80

DIVERSITY INDICES:

THREEPOINT SC
14 MAY 87 (DAY 134)

* SPECIES=29
STRATA DEPTH=
STRATA VOL.=
FILE NAME = SC014MAY87

REC #	SPECIES	CELL VOLUME	CORR. FACT.	RAW COUNT	ESD	CELLS /LITER	BIOMASS mg/m^3
	GROUP 1						
3	APHANIZOMENON FLOS-AQUAE	5000	7184	3	21.22	21552	107.76
	GROUP 2						
4	CHODATELLA SP.	60	7184	1	4.86	7184	0.43
5	MONORAPHIDIUM SETIFORME	90	7184	8	5.56	57472	5.17
6	MONORAPHIDIUM CONTORTUM	35	7184	8	4.06	57472	2.01
7	COELASTRUM SP.	280	7184	1	8.99	7184	2.02
	GROUP 3						
8	EUGLENA ACUS	12500	200	4	28.79	800	10.00
	GROUP 4						
9	SMALL CHRYSOPHYCEAE	50	7184	27	4.57	193968	9.70
10	LARGE CHRYSOPHYCEAE	380	7184	8	8.99	57472	21.84
11	MALLOMONAS AKROKOMOS	60	7184	1	4.86	7184	0.43
12	OCHROMONAS SP.	90	7184	5	5.56	35920	3.23
13	STELEXMONAS DICHOTOMS	80	7184	15	5.33	107760	8.62
	GROUP 5						
14	MELOSIRA GRANULATA	35000	7184	10	40.58	71840	**2514.40**
15	MELOSIRA ITALICA	22000	7184	3	35.28	21552	**495.70**
16	MELOSIRA SP.	30000	7184	9	38.55	64656	**1539.68**
17	CYCLOTELLA COMTA	91	200	4	5.58	800	**0.07**
18	CYCLOTELLA COMTA	450	7184	8	9.51	57472	**25.86**
19	TABELLARIA FLOCCULSA	1000	200	1	12.41	200	**0.20**
20	FRAGILARIA CONSTRUENS	180	200	10	7.01	2000	**0.36**
21	SYNEDRA ACUS	440	200	10	9.44	2000	**0.88**
22	ASTERIONELLA FORMOSA	150	200	73	6.59	14600	**2.19**
23	ASTERIONELLA FORMOSA	225	200	46	7.55	9200	**2.07**
	GROUP 6						
24	RHODOMONAS MINUTA	400	7184	265	9.14	1907760	**761.50**
25	CRYPTOMONAS EROSA	1300	200	63	12.54	12600	**16.38**
26	CRYPTOMONAS OVATA	3000	200	1	17.89	200	**0.60**
27	CRYPTOMONAS ROSTRATIFORM	2600	200	33	17.06	6600	**17.16**
28	KATABLEPHARIS OVALIS	225	7184	14	7.55	100576	**22.63**
	GROUP 7						
29	GYMNODINIUM SP.	19500	200	14	**33.39**	2800	**54.60**
30	PERIDINIUM INCONSPICUM	2000	200	14	15.63	2800	**5.60**
31	PERIDINIUM ACICULIFERRIM	9000	200	34	25.81	6800	**61.20**

SUMMARY

GROUP NUMBER	CELLS/L	% OF TOTAL	BIOMASS mg/m^3	% OF TOTAL
1	21552.00	0.76	107.76	1.77
2	129312.00	4.56	10.34	0.17
3	800.00	0.03	10.00	0.16
4	402304.00	14.19	43.82	0.72
5	244320.00	8.62	4981.41	81.76
6	2023736.00	71.40	818.27	13.43
7	12400.00	0.44	121.40	1.99
TOTAL	2834424.00		6093.01	

AVERAGE EQUIVELANT SPHEREICAL VOLUME= 14.32

DIVERSITY INDICES:

THREEPOINT S03

14 MAY 87 (DAY 134)

SPECIES=30
STRATA DEPTH=
STRATA VOL.=
FILE NAME = S0314MAYB7

REC #	SPECIES	CELL VOLUME	CORR. FACT.	RAW COUNT	ESD	CELLS /LITER	BIOMASS mg/m 3
	GROUP 1						
3	APHANIZOMENON FLOS-AQUAE	4250	7184	1	20.10	7184	30.53
4	LYNGBYA SP.	250	7184	1	7.82	7184	1.80
	GROUP 2						
5	CHLAMYDOMONAS SPP.	150	7184	1	6.59	7184	1.08
6	MONORAPHIDIUM SETIFORME	90	7184	25	5.56	179600	16.16
7	MONORAPHIDIUM CONTORTUM	40	7184	6	4.24	43104	1.72
8	CLOSTERIUM SP.	875	200	1	11.87	200	0.18
	GROUP 3						
9	EUGLENA ACUS	9900	200	6	26.64	1200	11.88
	GROUP 4						
10	SMALL CHRYSOPHYCEAE	50	7184	75	4.57	538800	26.94
11	LARGE CHRYSOPHYCEAE	380	7184	10	8.99	71840	27.30
12	SPINIFIROMONAS TRIORALIS	270	7184	2	8.02	14368	3.88
13	SYNURA SPAGNICOLA	380	7184	1	8.99	7184	2.73
14	CHRYSOCHROMULINA BRIV.LAU.	320	7184	1	8.49	7184	2.30
15	STELEXMONAS DICHOTOMS	80	7184	6	5.55	43104	3.45
	GROUP 5						
16	MELOSIRA GRANULATA	37500	7184	9	41.53	64656	2424.60
17	MELOSIRA ITALICA	23000	7184	3	35.26	21552	495.70
18	MELOSIRA SP.	30000	7184	2	38.55	14368	431.04
19	CYCLOTELLA COMTA	50	200	9	4.57	1800	0.09
20	CYCLOTELLA COMTA	280	7184	2	8.12	14368	4.02
21	TABELLARIA FENESTRATA	5000	200	13	21.22	2600	13.00
22	SYNEDRA ACUS	440	200	14	9.44	2800	1.23
23	ASTERIONELLA FORMOSA	150	200	23	6.59	4600	0.69
24	ASTERIONELLA FORMOSA	225	200	56	7.53	11200	2.52
25	STEPHANODISCUS ASTREAE	600	7184	1	10.46	7184	4.31
	GROUP 6						
26	RHODOMONAS MINUTA	400	7184	115	9.14	826160	330.46
27	CRYPTOMONAS EROSA	1300	200	55	13.54	11000	14.30
28	CRYPTOMONAS OVATA	3000	200	2	17.29	400	1.20
29	CRYPTOMONAS ROSTRATIFORM	2660	200	27	17.17	5400	14.36
	GROUP 7						
30	GYMNODINIUM SP.	19500	200	39	33.39	7800	152.10
31	PERIDINIUM INCONSPICUM	2100	200	17	15.89	3400	7.14
32	PERIDINIUM ACICULIFERRIM	9000	200	28	25.81	5600	50.40

SUMMARY

GROUP NUMBER	CELLS/L	% OF TOTAL	BIOMASS mg/m 3	% OF TOTAL
1	14368.00	0.74	32.33	0.79
2	230088.00	11.90	19.14	0.47
3	1200.00	0.06	11.88	0.29
4	682480.00	35.31	66.60	1.63
5	145128.00	7.51	3377.20	82.83
6	842960.00	43.61	360.33	8.84
7	16800.00	0.87	209.64	5.14
TOTAL	1933024.00		4077.11	

AVERAGE EQUIVELANT SPHEREICAL VOLUME= 14.78

DIVERSITY INDICES:
MARGALEF'S INDEX = 2.00
SHANNON-WEAVER INDEX = 2.60

****
* THREEPOINT S01 *
*
* 09 JUN 87 (DAY 160) *
****

SPECIES=27
STRATA DEPTH=
STRATA VOL.=
FILE NAME = S0109JUN87

REC #	SPECIES	CELL VOLUME	CORR. FACT.	RAW COUNT	ESD	CELLS /LITER	BIOMASS mg/m^3
	**********						
	GROUP 1						
	**********						
3	APHANIZOMENON FLOS-AQUAE	770	7184	1	11.37	7184	5.53
4	LYNGBYA SP.	500	7184	5	9.85	35920	17.96
	**********						
	GROUP 2						
	**********						
5	CHLAMYDOMONAS SPP.	60	7184	14	4.86	100576	6.03
6	MONORAPHIDIUM SETIFORME	90	7184	8	5.56	57472	5.17
7	MONORAPHIDIUM CONTORTUM	35	7184	12	4.06	86208	3.02
	**********						
	GROUP 4						
	**********						
8	SMALL CHRYSOPHYCEAE	50	7184	27	4.57	193968	9.70
9	LARGE CHRYSOPHYCEAE	380	7184	4	8.99	28736	10.92
10	CHRYSOCHROMULINA PARVA	113	7184	1	6.00	7184	0.81
11	DINOBRYON BAVARICUM	700	7184	1	11.02	7184	5.03
12	CHRYSOCHROMULINA BRIV.LAU.	380	7184	1	8.99	7184	2.73
13	STELEXMONAS DICHOTOMS	80	7184	2	5.35	14368	1.15
	**********						
	GROUP 5						
	**********						
14	MELOSIRA GRANULATA	37500	7184	7	41.53	50288	1885.80
15	MELOSIRA ITALICA	23000	7184	5	35.28	35920	826.16
16	MELOSIRA SP.	39000	7184	2	42.07	14368	560.35
17	CYCLOTELLA SPP.	70	7184	6	5.11	43104	3.02
18	CYCLOTELLA SPP.	3500	200	13	18.84	2600	9.10
19	TABELLARIA FENESTRATA	1800	200	39	15.09	7800	14.04
20	SYNEDRA ACUS	400	200	85	9.14	17000	6.80
21	SYNEDRA ACUS	600	200	10	10.46	2000	1.20
22	SYNEDRA ULNA	3200	200	4	18.28	800	2.56
23	ASTERIONELLA FORMOSA	110	200	49	5.94	9800	1.08
24	ASTERIONELLA FORMOSA	240	200	416	7.71	83200	19.97
25	DIATOMA SP	350	7184	3	8.74	21552	7.54
	**********						
	GROUP 6						
	**********						
26	RHODOMONAS MINUTA	90	7184	6	5.56	43104	3.88
27	CRYPTOMONAS EROSA	2100	200	1	15.89	200	0.42
	**********						
	GROUP 7						
	**********						
28	GYMNODINIUM SP.	15930	200	3	31.22	600	9.56
29	PERIDINIUM INCONSPICUM	2100	200	2	15.89	400	0.84

********** SUMMARY **********

GROUP NUMBER	CELLS/L	% OF TOTAL	BIOMASS mg/m^3	% OF TOTAL
1	43104.00	4.91	23.49	0.69
2	244256.00	27.80	14.22	0.42
3	0.00	0.00	0.00	0.00
4	258624.00	29.43	30.34	0.89
5	288432.00	32.82	3327.62	97.58
6	43304.00	4.93	4.30	0.13
7	1000.00	0.11	10.40	0.30
TOTAL	878720.00		3420.37	

****

AVERAGE EQUIVELANT SPHEREICAL VOLUME= 13.61

DIVERSITY INDICES:
MARGALEF'S INDEX = 1.90

THREEPOINT S02

09 JUN 87 (DAY 160)

SPECIES=38
STRATA DEPTH=
STRATA VOL.=
FILE NAME = S0209JUN87

REC #	SPECIES	CELL VOLUME	CORR. FACT.	RAW COUNT	ESD	CELLS /LITER	BIOMASS mg/m^3
	GROUP 1						
3	APHANIZOMENON FLOS-AQUAE	950	7184	4	12.20	28736	27.30
4	ANABAENA CIRCINALIS	11725	200	1	28.19	200	2.35
5	LYNGBYA SP.	445	7184	7	9.47	50288	22.38
	GROUP 2						
6	CHLAMYDOMONAS SPP.	20	7184	1	3.37	7184	0.14
7	CHLAMYDOMONAS SPP.	110	7184	1	5.94	7184	0.79
8	DICTYOSPHAERIUM SIMPLEX	50	7184	16	4.57	114944	5.75
9	MONORAPHIDIUM SETIFORME	90	7184	4	5.56	28736	2.59
10	MONORAPHIDIUM CONTORTUM	35	7184	15	4.06	107760	3.77
11	ELAKATOTHRIX GELATINOSA	50	7184	2	4.57	14368	0.72
12	MOUGEOTIA SP.	800	200	4	11.52	800	0.64
13	BOTRYOCOCCUS BRAUNII	24400	200	1	35.99	200	4.88
	GROUP 3						
14	ASTASIA SPP	110	7184	2	5.94	14368	1.58
	GROUP 4						
15	SMALL CHRYSOPHYCEAE	50	7184	29	4.57	208336	10.42
16	LARGE CHRYSOPHYCEAE	380	7184	6	8.99	43104	16.38
17	CHRYSOCHROMULINA PARVA	110	7184	6	5.94	43104	4.74
18	SYNURA SPAGNICOLA	350	7184	1	8.74	7184	2.51
19	STELEXMONAS DICHOTOMS	80	7184	8	5.35	57472	4.60
	GROUP 5						
20	MELOSIRA ITALICA	23000	7184	3	35.28	21552	495.70
21	MELOSIRA GRANULATA	37500	7184	6	41.53	43104	1616.40
22	CYCLOTELLA SPP.	650	7184	12	10.75	86208	56.04
23	CYCLOTELLA SPP.	1300	200	7	13.54	1400	1.82
24	RHIZOSOLENIA ERIENSE	1700	7184	5	14.81	35920	61.06
25	TABELLARIA FENESTRATA	1800	200	15	15.09	3000	5.40
26	TABELLARIA FLOCCULOSA	7 35	200	1	34.10	200	1.47
27	SYNEDRA ACUS	400	200	30	9.14	6000	2.40
28	SYNEDRA ACUS	600	200	29	10.46	5800	3.48
29	SYNEDRA ULNA	3200	200	12	18.28	2400	7.68
30	ASTERIONELLA FORMOSA	110	200	45	5.94	9000	0.99
31	ASTERIONELLA FORMOSA	240	200	256	7.71	51200	12.29
32	STEPHANODISCUS ASTREAE	650	7184	1	10.75	7184	4.67
	GROUP 6						
33	RHODOMONAS MINUTA	90	7184	8	5.56	57472	5.17
34	RHODOMONAS MINUTA	440	7184	3	9.44	21552	9.48
35	CRYPTOMONAS EROSA	2100	200	13	15.89	2600	5.46
36	CRYPTOMONAS OVATA	4500	200	1	20.48	200	0.90
37	CRYPTOMONAS ROSTRATIFORM	2660	200	7	17.19	1400	3.72
38	KATABLEPHARIS OVALIS	90	7184	3	5.56	21552	1.94
	GROUP 7						
39	GYMNODINIUM SP.	15900	200	4	31.20	800	12.72
40	PERIDINIUM INCONSPICUM	2100	200	3	15.89	600	1.26

CONT'D: THREEPOINT LAKE STN 3 09JUN87

SUMMARY

GROUP NUMBER	CELLS/L	% OF TOTAL	BIOMASS mg/m^3	% OF TOTAL
1	79224.00	7.12	52.02	2.15
2	281176.00	25.26	19.28	0.80
3	14368.00	1.29	1.56	0.07
4	359200.00	32.27	38.65	1.60
5	272968.00	24.52	2269.39	93.72
6	104776.00	9.41	26.68	1.10
7	1400.00	0.13	13.98	0.58
TOTAL	1113112.00		2421.58	

AVERAGE EQUIVELANT SPHEREICAL VOLUME= 13.25

DIVERSITY INDICES:

MARGALEF'S INDEX = 2.66

SHANNON-WEAVER INDEX = 4.16

THREEPOINT S03

09 JUN 67 (DAY 160)

SPECIES=35
STRATA DEPTH=
STRATA VOL.=
FILE NAME = S0309JUN67

REC #	SPECIES	CELL VOLUME	CORR. FACT.	RAW COUNT	ESD	CELLS /LITER	BIOMASS mg/m 3
	GROUP 1						
3	APHANIZOMENON FLOS-AQUAE	800	7184	1	11.52	7184	5.75
	GROUP 2						
4	CHLAMYDOMONAS SPP.	15	7184	3	3.06	21552	0.32
5	CHLAMYDOMONAS SPP.	90	7184	1	5.56	7184	0.65
6	MONORAPHIDIUM SETIFORME	150	7184	8	6.59	57472	8.62
7	MONORAPHIDIUM CONTORTUM	35	7184	11	4.06	79024	2.77
8	ELAKATOTHRIX GELATINOSA	50	7184	2	4.57	14368	0.72
9	PLANCTONEMA LAUTERBORNII	40	7184	8	4.24	57472	2.30
10	CLOSTERIUM SP.	1700	200	1	14.81	200	0.34
11	MOUGEOTIA SP.	820	200	4	11.61	800	0.66
	GROUP 3						
12	EUGLENA ACUS	13000	200	1	29.17	200	2.60
	GROUP 4						
13	SMALL CHRYSOPHYCEAE	50	7184	26	4.57	186784	9.34
14	LARGE CHRYSOPHYCEAE	380	7184	14	8.99	100576	38.22
15	CHRYSOCHROMULINA PARVA	110	7184	1	5.94	7184	0.79
16	DINOBRYON BAVARICUM	700	7184	2	11.02	14368	10.06
17	SALPINGOECA SP.	380	7184	1	8.99	7184	2.73
	GROUP 5						
18	MELOSIRA ITALICA	23000	7184	3	35.28	21552	495.70
19	MELOSIRA GRANULATA	37500	7184	3	41.53	21552	808.20
20	MELOSIRA SP.	39000	7184	1	42.07	7184	280.18
21	CYCLOTELLA COMTA	70	7184	3	5.11	21552	1.51
22	CYCLOTELLA SPP.	2216	200	10	16.18	2000	4.43
23	RHIZOSOLENIA ERIENSE	1700	7184	1	14.81	7184	12.21
24	TABELLARIA FENESTRATA	1800	200	3	15.09	600	1.08
25	TABELLARIA FLOCCULSA	25700	200	1	36.61	200	5.14
26	SYNEDRA ACUS	400	200	40	9.14	8000	3.20
27	SYNEDRA ACUS	600	200	9	10.46	1800	1.08
28	SYNEDRA ULNA	3200	200	11	18.28	2200	7.04
29	ASTERIONELLA FORMOSA	110	200	73	5.94	14600	1.61
30	ASTERIONELLA FORMOSA	240	200	393	7.71	78600	18.86
	GROUP 6						
31	RHODOMONAS MINUTA	90	7184	37	5.56	265808	23.92
32	CRYPTOMONAS EROSA	2100	200	7	15.89	1400	2.94
33	CRYPTOMONAS OVATA	4500	200	2	20.48	400	1.80
34	CRYPTOMONAS ROSTRATIFORM	2660	200	10	17.19	2000	5.32
35	KATABLEPHARIS OVALIS	90	7184	22	5.56	158048	14.22
	GROUP 7						
36	GYMNODINIUM SP.	15900	200	1	31.20	200	3.18
37	PERIDINIUM INCONSPICUM	2100	200	2	15.89	400	0.84

MARGALEF'S INDEX = 2.32
SHANNON-WEAVER INDEX = 3.62

CONT'D: THREE POINT LAKE 3743 09 JUNE 87

********** SUMMARY **********

GROUP NUMBER	CELLS/L	% OF TOTAL	BIOMASS mg/m^3	% OF TOTAL
1	7184.00	0.61	5.75	0.32
2	238072.00	20.23	16.37	0.92
3	200.00	0.02	2.60	0.15
4	316096.00	26.86	61.14	3.44
5	187024.00	15.89	1640.24	92.24
6	427656.00	36.34	48.21	2.71
7	600.00	0.05	4.02	0.23
TOTAL	1176832.00		1778.32	

****

AVERAGE EQUIVELANT SPHEREICAL VOLUME= 14.42

DIVERSITY INDICES:
MARGALEF'S INDEX = 2.43
SHANNON-WEAVER INDEX = 3.62

****
* THREEPOINT S01 *
*
* 07 JUL 87 (DAY 188) *
****

SPECIES=29
STRATA DEPTH=
STRATA VOL.=
FILE NAME = S0107JUL87

REC #	SPECIES	CELL VOLUME	CORR. FACT.	RAW COUNT	ESD	CELLS /LITER	BIOMASS mg/m^3
	GROUP 1						
3	APHANIZOMENON FLOS-AQUAE	973	7184	9	12.29	64656	62.91
4	ANABAENA CIRCINALIS	3000	200	1	17.89	200	0.60
5	ANABAENA CIRCINALIS	4000	200	1	19.69	200	0.80
6	LYNGBYA SP.	641	7184	3	10.70	21552	13.81
	GROUP 2						
7	CHLAMYDOMONAS SPP.	125	7184	1	6.20	7184	0.90
8	MONORAPHIDIUM SETIFORME	190	7184	1	7.13	7184	1.36
9	MONORAPHIDIUM CONTORTUM	36	7184	2	4.10	14368	0.52
10	CLOSTERIUM SP.	440	200	3	9.44	600	0.26
	GROUP 3						
11	EUGLENA ACUS	26500	200	2	36.99	400	10.60
	GROUP 4						
12	SMALL CHRYSOPHYCEAE	50	7184	33	4.57	237072	11.85
13	LARGE CHRYSOPHYCEAE	380	7184	8	8.99	57472	21.84
14	CHRYSOCHROMULINA PARVA	110	7184	1	5.94	7184	0.79
15	SYNURA SPAGNICOLA	490	7184	1	9.78	7184	3.52
16	DINOBRYON BORGEI	31	7184	1	3.90	7184	0.22
17	CHRYSOCHROMULINA BRIV.LAU.	700	7184	1	11.02	7184	5.03
18	SALPINGOECA SP.	550	7184	1	10.17	7184	3.95
	GROUP 5						
19	MELOSIRA ITALICA	23000	7184	1	35.28	7184	165.23
20	MELOSIRA SP.	37500	7184	2	41.50	14368	539.60
21	CYCLOTELLA SPP.	1500	200	7	14.20	1400	2.10
22	RHIZOSOLENIA ERIENSE	1000	7184	1	12.41	7184	7.18
23	SYNEDRA ACUS	400	200	16	9.14	3200	1.28
24	SYNEDRA ACUS	720	200	25	11.12	5000	3.60
25	SYNEDRA ULNA	3700	200	5	19.19	1000	3.70
26	ASTERIONELLA FORMOSA	135	200	55	4.36	11000	1.49
27	ASTERIONELLA FORMOSA	240	200	287	7.71	57400	13.78
	GROUP 6						
28	RHODOMONAS MINUTA	90	7184	24	5.56	172416	15.52
29	CRYPTOMONAS EROSA	3000	200	3	17.89	600	1.80
	GROUP 7						
30	GYMNODINIUM SP.	14000	200	2	29.90	400	5.60
31	PERIDINIUM INCONSPICUM	3000	200	3	17.89	600	1.80

********** SUMMARY **********

GROUP NUMBER	CELLS/L	% OF TOTAL	BIOMASS mg/m^3	% OF TOTAL
1	86608.00	11.89	78.13	8.67
2	29336.00	4.03	3.04	0.34
3	400.00	0.05	10.60	1.18
4	330464.00	45.36	47.21	5.24
5	107736.00	14.79	737.16	81.83
6	173016.00	23.75	17.32	1.92
7	1000.00	0.14	7.40	0.82
TOTAL	728560.00		900.85	

AVERAGE EQUIVELANT SPHEREICAL VOLUME= 14.03

DIVERSITY INDICES:

THREEPOINT S02

07 JUL 87 (DAY 188)

SPECIES=34
STRATA DEPTH=
STRATA VOL.=
FILE NAME = S0207JUL87

REC #	SPECIES	CELL VOLUME	CORR. FACT.	RAW COUNT	ESD	CELLS /LITER	BIOMASS mg/m 3
	GROUP 1						
3	APHANIZOMENON FLOS-AQUAE	760	7184	9	11.32	64656	49.14
4	ANABAENA CIRCINALIS	2800	200	2	17.49	400	1.12
5	ANABAENA CIRCINALIS	9100	200	1	25.90	200	1.82
6	LYNGBYA SP.	400	7184	1	9.14	7184	2.87
	GROUP 2						
7	CHLAMYDOMONAS SPP.	40	7184	3	4.24	21552	0.86
8	CHLAMYDOMONAS SPP.	100	7184	7	5.76	50288	5.03
9	OOCYSTIS LACUSTRIS	140	7184	3	6.44	21552	3.02
10	PAULSCHULZIA PSEUDEVOLVOX	195	7184	14	7.19	100576	19.61
11	MONORAPHIDIUM SETIFORME	95	7184	1	5.66	7184	0.68
12	MONORAPHIDIUM CONTORTUM	40	7184	10	4.24	71840	2.87
13	CRUCIGENIELLA SPP.	10	7184	4	2.67	28736	0.29
14	ANKISTRODESMUS BRAUNII	20	7184	4	3.37	28736	0.57
	GROUP 3						
15	EUGLENA ACUS	3300	200	3	18.47	600	1.98
	GROUP 4						
16	SMALL CHRYSOPHYCEAE	50	7184	65	4.57	466960	23.35
17	LARGE CHRYSOPHYCEAE	100	7184	4	5.76	28736	2.87
18	SYNURA SPAGNICOLA	490	7184	6	9.78	43104	21.12
19	DINOBRYON BAVARICUM	700	7184	1	11.02	7184	5.03
20	SALPINGOECA SP.	550	7184	1	10.17	7184	3.95
	GROUP 5						
21	MELOSIRA ITALICA	23000	7184	5	35.28	35920	826.16
22	MELOSIRA GRANULATA	37500	7184	3	41.53	21552	808.20
23	MELOSIRA SP.	39000	7184	1	42.07	7184	280.18
24	CYCLOTELLA SPP.	1000	200	4	12.41	800	0.80
25	RHIZOSOLENIA ERIENSE	1000	7184	3	12.41	21552	21.55
26	TABELLARIA FENESTRATA	1700	200	9	14.81	1800	3.06
27	SYNEDRA ACUS	400	200	15	9.14	3000	1.20
28	SYNEDRA ACUS	600	200	5	10.46	1000	0.60
29	SYNEDRA ULNA	12000	200	6	28.47	1200	14.40
30	ASTERIONELLA FORMOSA	135	200	77	6.36	15400	2.08
31	ASTERIONELLA FORMOSA	240	200	316	7.71	63200	15.17
	GROUP 6						
32	RHODOMONAS MINUTA	90	7184	65	5.56	466960	42.03
33	CRYPTOMONAS EROSA	3000	200	21	17.89	4200	12.60
34	CRYPTOMONAS MARSSONII	4500	200	2	20.48	400	1.80
35	CRYPTOMONAS ROSTRATIFORM	5300	200	1	21.63	200	1.06
	GROUP 7						
36	GYMNODINIUM HELVETICUM	16000	200	1	31.26	200	3.20

CONT'D: THREEPOINT LAKE STN 3 07 JULY 87

********** SUMMARY **********

GROUP NUMBER	CELLS/L	% OF TOTAL	BIOMASS mg/m 3	% OF TOTAL
1	72440.00	4.52	54.95	2.52
2	330464.00	20.64	32.94	1.51
3	600.00	0.04	1.98	0.09
4	553168.00	34.55	56.32	2.58
5	172608.00	10.78	1972.40	90.51
6	471760.00	29.46	57.49	2.64
7	200.00	0.01	3.20	0.15
TOTAL	1601240.00		2180.27	

****

AVERAGE EQUIVELANT SPHEREICAL VOLUME= 14.14

DIVERSITY INDICES:

MARGALEF'S INDEX = 2.31

SHANNON-WEAVER INDEX = 3.25

```
*****************************
*  THREEPOINT     SUB       *
*                           *
*  07 JUL 87 (DAY 188)      *
*****************************
```

\# SPECIES=20
STRATA DEPTH=
STRATA VOL.=
FILE NAME = S0307JULE?

REC #	SPECIES	CELL VOLUME	CORR. FACT.	RAW COUNT	ESD	CELLS /L	BIOMASS mg/m 3
	********** GROUP 1 **********						
3	APHANIZOMENON FLOS-AQUAE	940	7184	9	12.15	64656	60.78
4	ANABAENA CIRCINALIS	4600	200	18	20.63	3600	16.56
5	ANABAENA CIRCINALIS	27000	200	3	35.44	600	12.96
6	OSCILLATORIA SP.	380	7184	1	8.99	7184	2.73
	********** GROUP 2 **********						
7	CARTERIA SPP.	1050	7184	1	12.61	7184	7.54
8	CHLAMYDOMONAS SPP.	90	7184	7	5.56	50288	4.52
9	MONORAPHIDIUM SETIFORME	190	7184	2	7.17	14368	2.73
10	MONORAPHIDIUM CONTORTUM	36	7184	11	4.13	78824	2.84
11	CLOSTERIUM SP.	2090	200	1	15.85	200	0.42
	********** GROUP 3 **********						
12	EUGLENA ACUS	26500	200	3	76.99	600	15.90
13	TRACHELOMONAS HISPIDA	6400	200	1	23.04	200	1.28
	********** GROUP 4 **********						
14	SMALL CHRYSOPHYCEAE	50	7184	34	4.57	244256	12.21
15	LARGE CHRYSOPHYCEAE	350	7184	13	8.94	93392	32.69
16	SYNURA SPAGNICOLA	490	7184	6	9.78	43104	21.12
17	STELEXOMONAS DICHOTOMS	80	7184	2	5.35	14368	1.15
	********** GROUP 5 **********						
18	MELOSIRA ITALICA	22000	7184	2	35.28	14368	320.46
19	MELOSIRA GRANULATA	37500	7184	3	41.57	21552	808.20
20	CYCLOTELLA SPP.	5300	200	10	21.63	2000	10.60
21	RHIZOSOLENIA ERIENSE	1000	7184	4	12.41	28736	28.74
22	SYNEDRA ACUS	400	200	43	9.14	8600	3.44
23	SYNEDRA ACUS	720	200	8	11.12	1600	1.15
24	SYNEDRA ULNA	5400	200	6	21.77	1200	6.48
25	ASTERIONELLA FORMOSA	135	200	85	6.36	17000	2.30
26	**ASTERIONELLA FORMOSA**	**240**	**200**	**337**	**7.71**	**67400**	**16.18**
	********** GROUP 6 **********						
27	RHODOMONAS MINUTA	90	7184	91	5.56	653744	**58.84**
28	CRYPTOMONAS EROSA	3000	200	61	17.69	12200	**36.60**
29	CRYPTOMONAS ROSTRATIFORM	5300	200	19	21.63	3800	20.14
30	LATABLEPHARIS OVALIS	90	7184	10	5.56	71?4	6.47
	********** GROUP 7 **********						
31	GYMNODINIUM SP.	14000	200	1	29.90	200	**2.80**
32	PERIDINIUM INCONSPICUM	3000	200	5	17.89	1000	**3.00**

********** SUMMARY **********

GROUP NUMBER	CELLS/L	% OF TOTAL	BIOMASS mg/m 3	% OF TOTAL
1	76040.00	4.98	94.05	6.12
2	151064.00	9.88	18.06	1.18
3	800.00	0.05	17.18	1.12
4	395120.00	25.85	69.97	4.56
5	162456.00	10.63	1207.54	78.69
6	741584.00	48.52	122.04	7.95
7	1200.00	0.08	5.80	0.38
TOTAL	1528264.00		1534.65	

AVERAGE EQUIVELANT SPHEREICAL VOLUME= 15.89

DIVERSITY INDICES:
MARGALEF'S INDEX = 2.04
SHANNON-WEAVER INDEX = 3.04

```
**************************
*  THREEPOINT    S01     *
*                        *
*  04 AUG 87 (DAY 216)   *
**************************
```

* SPECIES=28
STRATA DEPTH=
STRATA VOL.=
FILE NAME = S0104AUG87

REC #	SPECIES	CELL VOLUME	CORR. FACT.	RAW COUNT	ESD	CELLS /LITER	BIOMASS mg/m^3
	GROUP 1						
3	APHANOTHECE SP.	3000	7184	1	17.89	7184	21.55
4	ANABAENA CIRCINALIS	3900	200	11	19.53	2200	8.58
5	LYNGBYA SP.	305	7184	3	8.35	21552	6.57
	GROUP 2						
6	CARTERIA SPP.	660	7184	1	10.60	7184	4.74
7	CHLAMYDOMONAS SPP.	90	7184	5	5.56	35920	**3.23**
8	PAULSCHULZIA PSEUDEVOLVOX	1562	200	20	14.40	4000	6.25
9	MONORAPHIDIUM SETIFORME	130	7184	1	5.76	7184	0.93
10	MONORAPHIDIUM CONTORTUM	35	7184	14	4.06	100576	**3.52**
	GROUP 3						
11	TRACHELOMONAS HISPIDA	11700	200	6	28.17	**1200**	14.04
	GROUP 4						
12	SMALL CHRYSOPHYCEAE	50	7184	66	4.57	474144	23.71
13	LARGE CHRYSOPHYCEAE	380	7184	9	8.99	64656	24.57
14	MALLOMONAS CAUDATA	3500	200	1	18.84	200	0.70
15	CHRYSOCHROMULINA BRIV.LAU.	380	7184	3	8.99	21552	8.19
16	SALPINGOECA SP.	380	7184	7	8.99	50288	19.11
	GROUP 5						
17	MELOSIRA GRANULATA	37500	7184	1	41.57	7184	269.40
18	MELOSIRA ITALICA	25000	7184	1	35.28	7184	185.33
19	CYCLOTELLA SPP.	530	200	2	10.04	400	0.21
20	SYNEDRA ACUS	400	200	23	9.14	4600	1.84
21	SYNEDRA ULNA	7300	200	1	24.07	200	1.46
22	ASTERIONELLA FORMOSA	110	200	15	5.94	3000	0.41
23	ASTERIONELLA FORMOSA	220	200	4	7.50	800	0.18
	GROUP 6						
24	RHODOMONAS MINUTA	90	7184	66	5.56	474144	42.67
25	RHODOMONAS MINUTA	550	200	6	9.74	**1200**	**0.42**
26	CRYPTOMONAS EROSA	2800	200	112	17.47	**22400**	**62.72**
27	CRYPTOMONAS ROSTRATIFORM	2600	200	3	17.06	**600**	1.56
28	KATABLEPHARIS OVALIS	210	7184	19	7.37	136496	**28.66**
	GROUP 7						
29	GYMNODINIUM SP.	27500	200	1	35.54	**200**	**4.70**
30	PERIDINIUM INCONSPICUM	2900	200	6	17.69	**1200**	**3.48**

********** SUMMARY **********

GROUP NUMBER	CELLS/L	% OF TOTAL	BIOMASS mg/m^3	% OF TOTAL
1	30936.00	2.12	36.71	5.04
2	154864.00	10.62	18.46	2.53
3	1200.00	0.08	14.04	1.93
4	610840.00	41.89	76.28	10.47
5	22968.00	1.64	438.72	60.23
6	634840.00	43.54	136.04	18.68
7	1400.00	0.10	8.18	1.12
TOTAL	1458048.00		728.43	

****

AVERAGE EQUIVELANT SPHEREICAL VOLUME= 14.57

DIVERSITY INDICES:
MARGALEF'S INDEX = 1.90
SHANNON-WEAVER INDEX = 2.77

****
* THREEPOINT S02 *
* *
* 04 AUG 87 (DAY 216) *
****

SPECIES=28
STRATA DEPTH=
STRATA VOL.=
FILE NAME = S0204AUG87

REC #	SPECIES	CELL VOLUME	CORR. FACT.	RAW COUNT	ESD	CELLS /LITER	BIOMASS mg/m 3
	********** GROUP 1 **********						
3	APHANIZOMENON FLOS-AQUAE	380	7184	1	8.99	7184	2.73
4	ANABAENA CIRCINALIS	2900	200	17	19.52	3400	10.26
	********** GROUP 2 **********						
5	CHLAMYDOMONAS SPP.	60	7184	1	4.85	7184	0.43
6	CHLAMYDOMONAS SPP.	175	7184	2	6.94	14368	2.51
7	OOCYSTIS LACUSTRIS	110	7184	3	5.94	21552	2.37
8	MONORAPHIDIUM SETIFORME	100	7184	9	5.75	64656	6.47
9	MONORAPHIDIUM CONTORTUM	35	7184	10	4.06	71840	2.51
	********** GROUP 3 **********						
10	TRACHELOMONAS HISPIDA	11700	200	4	28.17	800	9.36
	********** GROUP 4 **********						
11	SMALL CHRYSOPHYCEAE	50	7184	32	4.57	229952	11.65
12	LARGE CHRYSOPHYCEAE	350	7184	6	8.99	43104	15.08
13	CHRYSOCHROMULINA PARVA	50	7184	15	4.57	107760	5.39
14	MALLOMONAS CAUDATA	2500	200	1	18.84	200	0.70
15	MALLOMONAS PSEUDOCORONATA	2700	200	2	17.20	400	1.08
16	CHRYSOCHROMULINA BRIGHTII	500	7184	1	10.01	7184	3.77
17	BICOECA LACUSTRIS	380	7184	5	8.99	35920	13.65
	********** GROUP 5 **********						
18	MELOSIRA ITALICA	23000	7184	1	35.28	7184	165.23
19	RHIZOSOLENIA ERIENSE	1000	7184	1	12.41	7184	7.18
20	SYNEDRA ACUS	400	200	4	9.14	800	1.12
21	SYNEDRA ACUS	500	200	4	9.85	800	1.40
22	ASTERIONELLA FORMOSA	110	200	1	5.94	200	0.02
23	ASTERIONELLA FORMOSA	200	200	8	7.60	1600	0.37
	********** GROUP 6 **********						
24	RHODOMONAS MINUTA	90	7184	91	5.52	653744	73.64
25	RHODOMONAS MINUTA	350	7184	32	8.74	229888	80.46
26	CRYPTOMONAS EROSA	2800	200	351	17.49	70200	196.56
27	CRYPTOMONAS ROSTRATIFORM	2600	200	34	17.06	6800	17.68
28	KATABLEPHARIS OVALIS	210	7184	11	7.37	79024	16.60
	********** GROUP 7 **********						
29	GYMNODINIUM SP.	23500	200	6	35.54	1200	28.20
30	PERIDINIUM INCONSPICUM	2900	200	4	17.69	800	2.32

********** SUMMARY **********

GROUP NUMBER	CELLS/L	% OF TOTAL	BIOMASS mg/m 3	% OF TOTAL
1	10584.00	0.63	15.99	2.40
2	179600.00	10.68	14.30	2.14
3	800.00	0.05	9.36	1.40
4	431640.00	25.66	52.82	7.92
5	17768.00	1.06	173.53	26.03
6	1039656.00	61.81	370.12	55.52
7	2000.00	0.12	30.52	4.58
TOTAL	1682048.00		666.65	

****

AVERAGE EQUIVELANT SPHEREICAL VOLUME= 12.40

DIVERSITY INDICES:
MARGALEF'S INDEX = 1.88

* THREEPOINT SYS *
* *
* 04 AUG 87 (DAY 216) *
****

\# SPECIES=34
STRATA DEPTH=
STRATA VOL.=
FILE NAME = S0304AUG87

REC #	SPECIES	CELL VOLUME	CORR. FACT.	RAW COUNT	ESD	CELLS /LITER	BIOMASS mg/m 3
	********** GROUP 1 **********						
3	APHANOTHECE SP.	525	7184	1	10.01	7184	3.77
4	APHANIZOMENON FLOS-AQUAE	1800	7184	1	15.09	7184	12.93
5	ANABAENA PLANCTONICA	5425	200	7	21.80	1400	7.60
6	ANABAENA CIRCINALIS	5700	200	3	22.16	600	3.42
	********** GROUP 2 **********						
7	CHLAMYDOMONAS SPP.	350	7184	1	8.74	7184	2.51
8	CHLAMYDOMONAS SPP.	420	7184	1	9.29	7184	3.02
9	MONORAPHIDIUM SETIFORME	90	7184	1	5.56	7184	0.65
10	MONORAPHIDIUM SETIFORME	100	7184	3	5.76	21552	2.16
11	MONORAPHIDIUM CONTORTUM	35	7184	14	4.06	100576	3.52
	********** GROUP 3 **********						
12	TRACHELOMONAS HISPIDA	11700	200	4	28.17	800	9.36
	********** GROUP 4 **********						
13	SMALL CHRYSOPHYCEAE	50	7184	60	4.57	431040	21.55
14	LARGE CHRYSOPHYCEAE	380	7184	6	8.99	43104	16.38
15	SPINIFIROMONAS TRIORALIS	600	7184	1	10.46	7184	4.31
16	MALLOMONAS CAUDATA	3500	200	3	18.84	600	2.10
17	DINOBRYON BAVARICUM	700	7184	2	11.02	14368	10.06
18	CHRYSOCHROMULINA BRIV.LAU.	380	7184	4	8.99	28736	10.92
19	BICOECA AINIKMIAE	380	7184	1	8.99	7184	2.73
20	SALPINGOECA SP.	380	7184	2	8.99	14368	5.46
	********** GROUP 5 **********						
21	MELOSIRA ITALICA	23000	7184	1	35.28	7184	**165.23**
22	CYCLOTELLA COMTA	340	7184	4	8.66	28736	9.77
23	CYCLOTELLA COMTA	1250	200	3	13.37	600	0.75
24	RHIZOSOLENIA ERIENSE	1000	7184	2	12.41	14368	14.37
25	TABELLARIA FLOCCULSA	400	200	7	9.14	1400	0.56
26	SYNEDRA ULNA	730	200	1	11.17	200	0.18
27	ASTERIONELLA FORMOSA	220	200	33	7.81	6600	1.52
	********** GROUP 6 **********						
28	RHODOMONAS MINUTA	90	7184	43	5.56	308912	27.80
29	RHODOMONAS MINUTA	350	7184	37	8.74	265808	93.03
30	CRYPTOMONAS EROSA	2800	200	205	17.49	41000	117.14
31	CRYPTOMONAS ROSTRATIFORM	2600	200	61	17.06	12200	31.72
32	KATABLEPHARIS OVALIS	200	7184	18	7.26	129312	25.86
	********** GROUP 7 **********						
33	GYMNODINIUM SP.	23500	200	2	35.54	400	**9.40**
34	PERIDINIUM INCONSPICUM	2900	200	22	17.69	4400	12.76
35	PERIDINIUM SP.	24500	200	1	36.03	200	**4.90**
36	CERATIUM HIRUNDENELLA	44000	200	1	43.80	200	**8.80**

************* SUMMARY *************

GROUP NUMBER	CELLS/L	% OF TOTAL	BIOMASS mg/m 3	% OF TOTAL
1	16368.00	1.07	27.72	4.29
2	143680.00	9.39	11.85	1.83
3	800.00	0.05	9.36	1.45
4	546584.00	35.73	73.51	11.38
5	59088.00	3.86	192.34	29.77
6	758032.00	49.55	295.46	45.73
7	5200.00	0.34	35.86	5.55
TOTAL	1529752.00		646.10	

AVERAGE EQUIVELANT SPHERICAL VOLUME= 14.6a

DIVERSITY INDICES:

* THREEPOINT *
* *
* 21 AUG 87 (DAY 243) *

\# SPECIES=33
STRATA DEPTH=
STRATA VOL.=
FILE NAME = S01C1AUG87

REC #	SPECIES	CELL VOLUME	CORR. FACT.	RAW COUNT	ESD	CELLS /LITER	BIOMASS mg/m^3
	GROUP 1						
3	APHANIZOMENON FLOS-AQUAE	2300	7184	1	16.38	7184	16.52
4	ANABAENA PLANCTONICA	4600	200	1	20.63	200	0.92
5	ANABAENA CIRCINALIS	4500	200	5	20.48	1000	4.50
	GROUP 2						
6	CHLAMYDOMONAS SPP.	70	7184	1	5.11	7184	0.50
7	CHLAMYDOMONAS SPP.	370	7184	3	8.91	21552	7.97
8	CHLAMYDOMONAS SPP.	510	7184	2	9.91	14368	7.33
9	CHODATELLA SP.	60	7184	3	4.86	21552	1.29
10	MONORAPHIDIUM SETIFORME	110	7184	1	5.94	7184	0.79
11	ELAKATOTHRIX GELATINOSA	50	7184	8	4.57	57472	2.87
12	ANKYRA JUDAI	90	7184	1	5.56	7184	0.65
	GROUP 3						
13	TRACHELOMONAS HISPIDA	9200	200	3	26.00	600	5.52
	GROUP 4						
14	SMALL CHRYSOPHYCEAE	50	7184	64	4.57	459776	22.99
15	LARGE CHRYSOPHYCEAE	380	7184	12	8.99	86208	32.76
16	MALLOMONAS CAUDATA	4200	200	6	20.13	1200	5.04
17	SYNURA SPAGNICOLA	41600	200	1	42.99	200	8.32
18	CHRYSOCHROMULINA BRIV.LAU.	525	7184	4	10.01	28736	15.09
19	BICOECA LACUSTRIS	100	7184	5	5.76	35920	3.59
20	SALPINGOECA SP.	450	7184	1	9.36	7184	3.23
21	PTERIDOMONAS SP	1050	7184	1	12.61	7184	7.54
	GROUP 5						
22	MELOSIRA ITALICA	23000	7184	2	35.26	14368	330.46
23	CYCLOTELLA SPP.	170	7184	10	6.87	71840	12.21
24	CYCLOTELLA SPP.	1300	200	81	13.54	16200	21.06
25	SYNEDRA ACUS	140	200	1	6.42	200	.03
26	**SYNEDRA ACUS**	**400**	**200**	**10**	**9.14**	**2000**	**0.80**
27	ASTERIONELLA FORMOSA	220	200	71	7.49	14200	3.12
	GROUP 6						
28	RHODOMONAS MINUTA	90	7184	52	5.56	373568	33.62
29	RHODOMONAS MINUTA	350	7184	59	8.74	423856	148.35
30	CRYPTOMONAS EROSA	2000	200	131	15.63	26200	52.40
31	CRYPTOMONAS ROSTRATIFORM	5100	200	51	18.09	10200	51.62
32	KATABLEPHARIS OVALIS	200	7184	26	7.26	186784	37.36
	GROUP 7						
33	GYMNODINIUM SP.	690	7184	1	10.96	7184	4.96
34	GYMNODINIUM SP.	17700	200	1	32.37	200	3.54
35	PERIDINIUM INCONSPICUM	2300	200	4	17.49	800	2.24

************** SUMMARY **************

GROUP NUMBER	CELLS/L	% OF TOTAL	BIOMASS mg/m^3	% OF TOTAL
1	8384.00	0.44	21.94	2.65
2	136496.00	7.11	21.41	2.58
3	600.00	0.03	5.52	0.67
4	626408.00	32.63	98.54	11.88
5	118803.00	6.19	367.69	44.34
6	1020608.00	53.17	303.75	36.58
7	8184.00	0.42	10.74	1.29
TOTAL	1919488.00		829.18	

AVERAGE EQUIVELANT SPHEREICAL VOLUME= 13.26

DIVERSITY INDICES:

THREEPOINT S02

31 AUG 87 (DAY 243)

SPECIES=40
STRATA DEPTH=
STRATA VOL.=
FILE NAME = S0231AUG87

REC #	SPECIES	CELL VOLUME	CORR. FACT.	RAW COUNT	ESD	CELLS /LITER	BIOMASS mg/m 3
	GROUP 1						
3	GOMPHOSPHAERIA LACUSTRIS	7600	200	3	24.09	600	4.56
4	APHANIZOMENON FLOS-AQUAE	2500	7184	2	16.78	14368	35.92
5	ANABAENA CIRCINALIS	7200	200	11	23.96	2200	15.84
	GROUP 2						
6	CHLAMYDOMONAS SPP.	70	7184	5	5.11	35920	2.51
7	PAULSCHULZIA PSEUDOVOLVOX	380	200	24	8.99	4800	1.82
8	DICTYOSPHAERIUM SIMPLEX	15	7184	8	3.04	57472	0.86
9	MONORAPHIDIUM SETIFORME	100	7184	2	5.76	14368	1.44
10	MONORAPHIDIUM CONTORTUM	35	7184	6	4.16	43104	1.51
11	CRUCIGENIELLA SPP.	50	7184	4	4.57	28736	1.44
12	CLOSTERIUM SP.	4200	200	1	20.02	200	0.84
13	COSMARIUM SP.	1400	200	1	13.98	200	0.28
14	BOTRYOCOCCUS BRAUNII	50000	200	3	45.71	600	30.00
	GROUP 3						
15	EUGLENA ACUS	26500	200	8	36.99	1600	42.40
16	TRACHELOMONAS VOLVOCINA	1500	200	5	14.20	1000	1.50
	GROUP 4						
17	SMALL CHRYSOPHYCEAE	50	7184	106	4.57	761504	38.08
18	LARGE CHRYSOPHYCEAE	380	7184	4	8.97	28736	10.92
19	CHRYSOCHROMULINA PARVA	50	7184	1	4.57	7184	0.36
20	MALLOMONAS ACROMOS	80	7184	1	5.05	7184	0.57
21	MALLOMONAS SPP.	500	200	15	9.05	3000	1.50
22	DINOBRYON BAVARICUM	700	7184	1	11.02	7184	5.02
23	CHRYSOCHROMULINA BRIV.LAU.	380	7184	8	8.99	57472	21.84
24	BICOECA LACUSTRIS	100	7184	5	5.76	35920	3.59
25	SALPINGOECA SP.	430	7184	1	9.06	7184	3.09
	GROUP 5						
26	**MELOSIRA ITALICA**	**21600**	**7184**	**6**	**54.65**	**43104**	**931.05**
27	CYCLOTELLA GLOMERATA	400	200	12	9.14	2400	0.96
28	CYCLOTELLA SPP.	1200	200	22	13.54	4400	5.28
29	TABELLARIA FENESTRATA	1600	200	33	14.51	6600	10.56
30	TABELLARIA FLOCCULSA	6900	200	7	23.62	1400	9.66
31	SYNEDRA ULNA	3000	200	11	17.87	2200	6.60
32	ASTERIONELLA FORMOSA	140	200	154	6.44	30800	4.31
33	ASTERIONELLA FORMOSA	220	200	103	7.45	20600	4.53
34	STEPHANODISCUS ASTREAE	1600	200	3	14.51	600	0.96
	GROUP 6						
35	RHODOMONAS MINUTA	90	7184	66	5.56	474144	42.67
36	RHODOMONAS MINUTA	350	7184	47	8.74	337648	118.18
37	CRYPTOMONAS EROSA	2000	200	369	15.62	73800	147.60
38	CRYPTOMONAS ROSTRATIFORM	3100	200	121	18.04	24200	75.02
39	KATABLEPHARIS OVALIS	200	7184	16	7.26	114944	22.99
	GROUP 7						
40	GYMNODINIUM SP.	17700	200	3	32.33	600	10.62
41	PERIDINIUM INCONSPICUM	2800	200	7	17.49	1400	3.92
42	CERATIUM HIRUNDENELLA	50000	200	2	45.71	400	20.00

CONT'D: THREEPOINT LAKE, STN 2, 21 AUG 87

********** SUMMARY **********

GROUP NUMBER	CELLS/L	% OF TOTAL	BIOMASS mg/m^3	% OF TOTAL
1	17168.00	0.76	33.45	2.03
2	185400.00	8.19	40.70	2.48
3	2600.00	0.11	43.90	2.67
4	915368.00	40.44	84.98	5.18
5	116104.00	5.13	977.23	59.54
6	1024736.00	45.27	406.46	24.77
7	2400.00	0.11	34.54	2.10
TOTAL	2263776.00		1641.26	

****

AVERAGE EQUIVELANT SPHEREICAL VOLUME= 14.70

DIVERSITY INDICES:

MARGALEF'S INDEX = 2.67

SHANNON-WEAVER INDEX = 3.20

****
* THREEPOINT S03 *
* *
* 31 AUG 87 (DAY 243) *
****

* SPECIES=31
STRATA DEPTH=
STRATA VOL.=
FILE NAME = S0331AUG87

REC #	SPECIES	CELL VOLUME	CORR. FACT.	RAW COUNT	ESD	CELLS /LITER	BIOMASS mg/m^3
	********** GROUP 1 **********						
3	ANABAENA CIRCINALIS	5700	200	1	22.16	200	1.14
	********** GROUP 2 **********						
4	CHLAMYDOMONAS SPP.	350	7184	1	8.74	7184	2.51
5	CHLOROGONIUM MAXIMUM	70	7184	3	5.11	21552	1.51
6	DICTYOSPHAERIUM SIMPLEX	15	7184	4	3.06	28736	0.43
7	MONORAPHIDIUM SETIFORME	110	7184	1	5.94	7184	0.79
8	MONORAPHIDIUM CONTORTUM	350	7184	1	8.74	7184	2.51
9	BOTRYOCOCCUS BRAUNII	42000	200	2	42.10	400	16.80
	********** GROUP 3 **********						
10	EUGLENA ACUS	26500	200	2	36.99	400	10.60
11	TRACHELOMONAS VOLVOCINA	1500	200	3	14.20	600	0.90
	********** GROUP 4 **********						
12	SMALL CHRYSOPHYCEAE	50	7184	59	4.57	423856	21.19
13	LARGE CHRYSOPHYCEAE	780	7184	5	8.99	35920	10.65
14	MALLOMONAS CAUDATA	4300	200	7	20.18	1400	6.02
15	MALLOMONAS PSEUDOCORONATA	1400	200	2	13.88	400	0.56
16	MALLOMONAS ACROMOS	80	7184	1	5.35	7184	0.57
17	BICOECA LACUSTRIS	100	7184	2	5.76	14368	1.44
18	SALPINGOECA SP.	430	7184	1	9.36	7184	3.09
19	STELEXMONAS DICHOTOMS	80	7184	5	5.35	35920	2.87
	********** GROUP 5 **********						
20	MELOSIRA ITALICA	23000	7184	2	35.28	14368	330.46
21	CYCLOTELLA COMTA	1300	200	21	13.54	4200	5.46
22	TABELLARIA FENESTRATA	1600	200	5	14.51	1000	1.60
23	SYNEDRA ACUS	220	200	13	7.49	2600	0.57
24	SYNEDRA ACUS	400	200	2	9.14	400	0.16
25	ASTERIONELLA FORMOSA	140	200	33	6.46	6600	1.84
26	**ASTERIONELLA FORMOSA**	**220**	**200**	**164**	**7.49**	**32800**	**7.22**
	********** GROUP 6 **********						
27	RHODOMONAS MINUTA	90	7184	68	5.56	438512	40.97
28	RHODOMONAS MINUTA	350	7184	128	8.74	919552	321.84
29	CRYPTOMONAS EROSA	2000	200	240	15.63	48000	96.00
30	CRYPTOMONAS ROSTRATIFORM	3100	200	107	18.07	21400	66.34
31	KATABLEPHARIS OVALIS	200	7184	24	7.26	172416	34.48
	********** GROUP 7 **********						
32	GYMNODINIUM SP.	17700	200	5	32.33	1000	17.70
33	PERIDINIUM INCONSPICUM	2800	200	6	17.49	1200	3.36

********** SUMMARY **********

GROUP NUMBER	CELLS/L	% OF TOTAL	BIOMASS mg/m^3	% OF TOTAL
1	200.00	0.01	1.14	0.11
2	72240.00	3.12	24.56	2.42
3	1000.00	0.04	11.50	1.13
4	526232.00	22.76	49.40	4.86
5	59958.00	2.59	346.12	34.05
6	1649880.00	71.37	562.60	55.36
7	2200.00	0.10	21.06	2.07
TOTAL	2311720.00		1016.40	

AVERAGE ECUIVELANT SPHEREICAL VOLUME= 13.57

DIVERSITY INDICES: